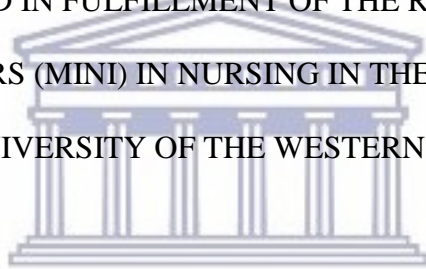


UNIVERSITY OF THE WESTERN CAPE
FACULTY OF COMMUNITY AND HEALTH SCIENCES
SCHOOL OF NURSING

ASSESSING KNOWLEDGE, SKILLS AND ATTITUDES OF UNDERGRADUATE
NURSING STUDENTS REGARDING STUDENT-CENTERED LEARNING
APPROACH IN A UNIVERSITY IN THE VOLTA REGION, GHANA

A THESIS SUBMITTED IN FULFILLMENT OF THE REQUIREMENTS FOR THE
DEGREE OF MASTERS (MINI) IN NURSING IN THE SCHOOL OF NURSING,
UNIVERSITY OF THE WESTERN CAPE



UNIVERSITY of the
WESTERN CAPE

NAME: INNOCENTIA RUBY GBORGBLORVOR

STUDENT NUMBER: 3580115

SUPERVISOR: PROF. D. R. PHETLHU (PHD)

NOVEMBER, 2016

DECLARATION

I declare that the study entitled “Assessing Knowledge, Skills and Attitudes of Undergraduate Nursing Students Regarding Student-Centered Learning Approach” is my own work, and that it has not been previously submitted for any degree or examination at any other university, and that all the sources that I have used or quoted, have been indicated and acknowledged by complete references.

Name: Innocentia Ruby Gborgblorvor

Sign:



November, 2016



UNIVERSITY *of the*
WESTERN CAPE

DEDICATION

I dedicate this work to God who has good plans for me and has sustained me through the challenges I faced pursuing this degree. God, you are awesome.



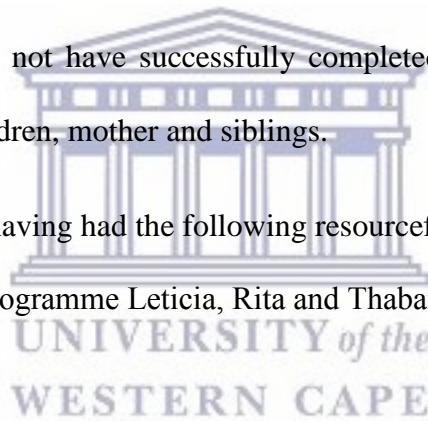
UNIVERSITY *of the*
WESTERN CAPE

ACKNOWLEDGEMENTS

My first and deepest thanks go to the Almighty God who makes all things beautiful in His own way and time.

I would like to acknowledge and express my profound gratitude to my supervisor, Prof. D. R. Phetlhu for her constructive guidance throughout the research process. Also, the Ethical Committee of the university in which the research study was conducted deserves my greatest acknowledgement. The solid contribution of the following group of people cannot be ignored: the respondents of the study and members of the Faculty of Nursing at the University of the Western Cape. My heartfelt gratitude to my persevering husband: his sustenance of the home in my absence and his unflinching support throughout my study are not forgotten. I could not have successfully completed without the inspiration and encouragement of my children, mother and siblings.

Finally, I am grateful for having had the following resourceful and wonderful study mates throughout the master's programme Leticia, Rita and Thabani.



LIST OF ABBREVIATIONS

SCLA – Student-centered learning approach

IT - Information technology

PBL - Problem-based learning

CBL - Case-based learning



UNIVERSITY *of the*
WESTERN CAPE

ABSTRACT

Globally, Student-Centered Learning Approach (SCLA) as a pedagogical strategy has become the accepted practice in higher education. This approach to teaching and learning requires that students take responsibility for their own learning, and the teacher only facilitates and guides the students in the learning process. SCLA more often than not builds students' confidence and critical thinking skills. The benefits of SCLA to students have been well documented however there is a dearth of knowledge of SCLA on the experiences of undergraduate nursing student whose previous learning did not expose them to student-centered learning approach.

This study has examined the knowledge, skills and attitude of undergraduate nursing students in a university in Volta Region, Ghana regarding student-centered learning approach. Quantitative descriptive research design was employed for the study. The target population for the study was the undergraduate nursing students in the participating university. The total study population was four hundred and seventy-four (474) undergraduate nursing students in the four-year programme.

Stratified sampling method was adopted and the sample size was 248 undergraduate nursing students. Self-administered structured questionnaires were used to gather data. The data was analyzed using Statistical Package for Social Sciences (SPSS) version 23. Descriptive statistics methods were used to summarize and present data in frequency tables and graphs. All ethical procedures were adhered to throughout the study.

The findings of the study suggested that less than half of the respondents had prior knowledge of SCLA before entering the university. The study further showed that about half of the respondents who earlier indicated they had good knowledge of SCLA rather lacked adequate understanding of SCLA. The study also established that undergraduate

nursing students developed learning skills and positive attitude towards SCLA as they progressed in their study. The identified respondents of the study lacked functional knowledge, skills and had negative attitude regarding SCLA before entering the university.

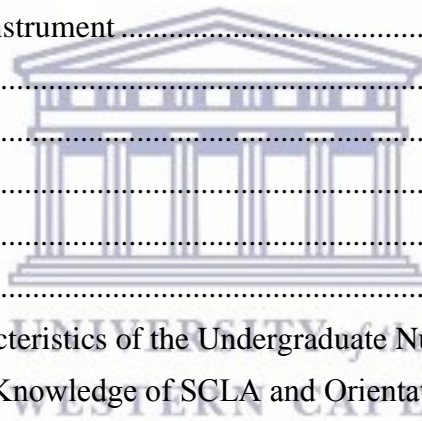
KEY WORDS: Student-centered learning approach, Knowledge, Skills, Attitude



TABLE OF CONTENTS

DECLARATION	ii
DEDICATION	iii
ACKNOWLEDGEMENTS	iv
LIST OF ABBREVIATIONS	v
ABSTRACT	vi
LIST OF TABLES	xi
LIST OF FIGURES.....	xii
CHAPTER ONE	1
OVER VIEW OF THE STUDY	1
1.1 Introduction.....	1
1.2 Background of the Study	2
1.3 Problem Statement	6
1.4 Aim of Study.....	7
1.5 Research Objectives	7
1.6 Operational Definitions.....	8
1.7 Significance of the Study.....	8
1.8 Hypothesis.....	9
1.9 Research Design and Method	9
1.10 Outline of Chapters	9
1.11 Summary	10
CHAPTER TWO.....	11
LITERATURE REVIEW.....	11
2.1 Introduction.....	11
2.2 What is Student Centred Learning Approach?	11
2.3 Benefits of Student–Centred Learning Approach.....	13
2.4 Students’ Perception about Student-Centred Learning Approach.....	18
2.5 Potential Outcome of Student-Centred Learning Approach	19
2.6 Student-Centered Learning Approach and Nursing Education.....	19
2.7 Summary	22
CHAPTER THREE.....	23
RESEARCH METHODOLOGY	23
3.1 Introduction.....	23
3.2 Research Design.....	23
3.3 Quantitative Research	23

3.4 Descriptive Design.....	23
3.5 Research Setting.....	24
3.6 The Study Population.....	25
3.7 Sampling	25
3.8 Sampling Technique	25
3.9 Sample Size.....	26
3.10 Recruitment Strategy	27
3.11 Inclusion and Exclusion Criteria.....	27
3.12 Data Collection Instrument	27
3.13 Pilot Study.....	29
3.14 Data Collection Procedure	30
3.15 Data Analysis	30
3.16 Rigors of the Study	31
3.17 Validity of the Instrument.....	31
3.18 Reliability of the Instrument.....	32
3.19 Ethics.....	33
3.20 Summary	35
CHAPTER FOUR.....	37
RESULTS.....	37
4.1 Introduction.....	37
4.2 Demographic Characteristics of the Undergraduate Nursing Students Studied	37
4.3 Respondents' Prior Knowledge of SCLA and Orientation on SCLA.....	38
4.4 Respondents' Prior Knowledge Regarding SCLA before Entering the University According to Year of Study	39
4.5 Chi square of respondents' prior knowledge regarding SCLA before entering the university, according to year of study.....	39
4.6 Correlation between Respondents' Prior Knowledge of SCLA and Orientation on SCLA	40
4.7 Sources of Information on SCLA	41
4.8 Respondents' Knowledge of SCLA.....	42
4.9 Respondents' Rating of Knowledge of SCLA.....	43
4.10 Respondents' Rating of Understanding SCLA	44
4.11 Correlation between Rating of Knowledge of SCLA and Understanding of SCLA	44
4.12 Respondents' Skills in SCLA	45
4.13 Respondents' Attitude towards SCLA.....	46
4.14 Summary	47



CHAPTER FIVE.....	49
DISCUSSION	49
5.1 Introduction.....	49
5.2 Gender Distribution of the Respondents.....	49
5.3 Year of Study of Respondents	50
5.4 Sources of Information on SCLA	50
5.5 Respondents' Knowledge regarding SCLA.....	51
5.6 Respondents' Year of Study and Rating of Knowledge of SCLA.....	52
5.7 Year of Study and Level of Understanding of SCLA.....	52
5.8 Skills Respondents have in SCLA	52
5.9 Respondents' Attitude toward SCLA	53
5.10 Summary	54
CHAPTER SIX	55
CONCLUSION AND RECOMMENDATION.....	55
6.1 Introduction.....	55
6.2 Summary of the Research Findings.....	55
6.3 Recommendations from this Study.....	56
6.3.1 Ghana Education Service	56
6.3.2 Participatory university	56
6.3.4 Recommendations for future research.....	57
6.3.5 Recommendations for nursing education.....	57
6.4 Conclusion	57
6.5 Limitations of the Study.....	58
REFERENCES.....	59
APPENDICE.....	66
Appendix 1: Information Sheet.....	66
Appendix 2: Participants Informed Consent Form	69
Appendix 3: Data Collection Instrument	70
Appendix 4: Ethical Clearance	74
Appendix 5: Permission to Conduct Research Study	75
Appendix 6: Approval from Participatory University	77
Appendix 7: Proofreading Certificate	78

LIST OF TABLES

Table 1.1: Research design and methodology	9
Table 3.1: Stratified study sample	27
Table 3.2: Summary of questionnaire's variables questions	29
Table 3.3: Knowledge score scale	31
Table 3.4: Content validity measure	32
Table 4.1: Socio-demographic characteristics of undergraduate nursing students.....	38
Table 4.2: Prior knowledge and orientation of SCLA	39
Table 4.3: Respondents' prior knowledge regarding SCLA	39
Table 4.4: Chi square test table	40
Table 4.5: Correlation between prior knowledge of SCLA and orientation on SCLA ...	40
Table 4.6: Source of information about SCLA.....	41
Table 4.7: Respondents' knowledge of SCLA	42
Table 4.8: Pearson's Correlation between rating of knowledge of SCLA and understanding of SCLA.....	44
Table 4.9: Skills the respondents have in SCLA	45
Table 4.10: Respondents' attitude towards SCLA	47

LIST OF FIGURES

Figure 4.1: Respondents' rating of knowledge on SCLA.....	43
Figure 4.2: Respondents' rating of understanding of SCLA	44



CHAPTER ONE

OVER VIEW OF THE STUDY

1.1 Introduction

Education seeks to empower students by cultivating in them critical thinking skills and innovative ways of solving complex social problems. For decades, the direct instruction method has dominated the field of learning and education. However, in recent years, diverse innovative teaching and learning strategies have developed and are being used in higher institutions of learning. Some of these strategies include student-centered learning approach (SCLA), self-directed learning, collaborative learning, case based learning and problem based learning (Sadlo, 2016: p. 6). Student-centered learning approach is the focus in this study for, it has been incorporated with the traditional direct instructional method in training undergraduate nursing students in a university in the Volta Region of Ghana. Because SCLA is not used in basic and secondary school education in Ghana, the Nursing students surveyed in a university in the Volta Region, Ghana are unfamiliar with the method. It is against this background that the present study assessed the undergraduate nursing students' knowledge, skills and attitude as far as the SCLA method is concerned.

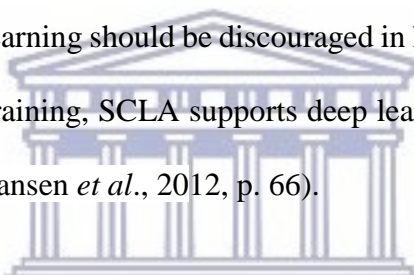
The structure for the introductory chapter of the study is as follows:

- i. Background of the Study
- ii. Problem Statement
- iii. Aim of the Study
- iv. Research Objectives
- v. Significance of the Study
- vi. Operational Definition
- vii. Hypotheses
- viii. Outline of the Study

1.2 Background of the Study

Before the emergence of SCLA, educational instruction was delivered through the traditional lecture method in which the teacher controlled the content of teaching, thereby making student passive in the teaching and learning process. The appeal for a more proactive teaching and learning method is causing a decline in the use of the once popular lecture style of teaching in higher institutions of learning (Paterson *et al.* 2012: p. 13). According to Williams (2015), contemporary teaching methods have shifted from the control of education by the educator to a student-centered method, where students actively play a role in their education. Delivering large volumes of information to students using the traditional method poses a challenge to students' understanding and retention. As a result, the teaching approach in the field of medical education shifted from traditional method of teaching to the student-centered learning method (Samarakoon *et al.*, 2013: p.1). The student-centered learning approach which includes case-based learning, problem-based learning, simulation learning, collaborative learning, active learning, blended learning and others allow students to control their own education. The benefit of the SCLA is that students are able to positively influence the content of teaching and learning in higher institutions. SCLA is useful and applicable to a variety of disciplines in higher educational institutions in various educational programmes (Mtika & Gates, 2010: p. 396). In order to enable students to achieve their course objectives, problem-based learning methods are employed in aligning theory with practical experience and use of knowledge and skills to address social challenges (Savery, 2015: p. 5). In outcome based education, SCLA is preferred over lecture method, for in modern tertiary education, teachers are supposed to serve as facilitators rather than transmitters of knowledge (Laguador, 2014, p 46).

Studies have shown that the advantages of SCLA are in various contexts. For example, Jordan *et al.* (2014: p.13) found that the majority of the faculty in Hawler Medical University have applauded SCLA and expressed their readiness to implement it because of its potential to improve student learning. According to Marangoni and Haley (2016: p. 375), although the teacher centered approach is the predominant method of teaching in Wheeling Jesuit University USA, this has not helped their students to acquire the requisite knowledge for their professional practice. However, the adoption of SCLA has made it possible for students to construct their own knowledge on how to manage their client. McCabe and O'Connor (2014, p. 350), also, reported that SCLA inspires students to be more accountable for their own learning; they further noted that teacher instructional approach to teaching and learning should be discouraged in higher educational institutions. In the context of nursing training, SCLA supports deep learning and can enhance nurses' progressive education (Johansen *et al.*, 2012, p. 66).



Learners react to SCLA differently, especially those who have no previous experience of SCLA. According to Jacobs and Toh-Heng (2013: p. 9), most students entering higher institutions are used to rote learning; as a result, they presume that teaching and learning in higher institutions would be conducted in the same manner as pertains at the lower levels. This presumption of students places a greater responsibility on educators in higher institutions, for they are faced with the challenge of reorienting students to how teaching and learning is organised in higher institutions.

Murdoch-Eaton and Whittle (2004: p. 576), observe that most first-year students lack adequate learning skills especially in information technology (IT). They emphasize that structuring school curriculum to include learning activities that will engage new undergraduate students may increase life-long learning skills and experiences especially in

(IT). Lea *et al.* (2003: p. 326), found that though student-centred learning approach has a high recognition globally as the effective method for educating people, some beneficiaries are not in favour of it because they lack adequate knowledge of SCLA.

Despite the benefits of SCLA in professional and graduate education, not every student in higher education is in favour of using SCLA. Some students still prefer traditional method and rote learning (Baeten *et al.*, 2016: p. 43). Students prefer teaching and learning strategies that they are comfortable with so they may become apprehensive that their goal for learning may not be realised as expected when a particular strategy does not meet their expectation (Jacobs & Toh-Heng: 2013: p. 9). Lea *et al.* (2003: p. 326) found that that 60% of undergraduate students in University of Plumouth were not conversant with the SCLA and they also adopted negative attitudes towards SCLA. Some educators also have concerns of adopting SCLA, for they are afraid that the teacher's authority will be relegated to the student in the new educational approach (Jordan *et al.*, 2014: p 13). Nursing scholars have proposed that teaching methods need to change from teacher-dominance to a student-centered one where students govern their own learning as well as create their own knowledge and capabilities for the profession (Chang, 2013: p. 1178).

Considering the magnitude of nursing responsibilities in the healthcare industry, nurses are required to be knowledgeable and skillful. It is therefore proposed by Robinson and Dearmon (2013: p. 203) that SCLA should be used to prepare undergraduate nursing students by providing them more opportunity to have practical clinical experiences. Stanley and Dougherty (2010: p. 378), stated that the shift in nursing education from teacher-centred method to student-centered education is appropriate. The appeal for a change in nursing education is to meet the changing needs of the undergraduate nursing student as teacher-centered approach has failed to promote logical thinking among nursing students

During clinical practice, Khalaila (2014: p. 252), observed that nursing students are novices who are largely apprehensive; thus, Khalaila believed that SCLA has the potential to allay the fears of nursing students and support them through their learning. In some cases, employing simulation learning prior to the actual clinical engagement was found to be a useful and a productive teaching strategy. Murphy *et al.* (2011: p147), found that just as technology, general and governmental matters have changed, nursing education and practice have also changed. The new methods to teaching and learning methods inspire undergraduate nursing students to engage in critical thinking, serious analysis and help develop abilities to make informed decisions in their field of practice. Chambers *et al.* (2013: p. 111) also stated that since contemporary nursing care is dynamic and complex, nursing education needs to adopt teaching and learning approaches that will produce desired intellectual and cognitive skills. Nursing education programmes should adopt SCLA and problem based-learning (PBL) strategies since they will assist students to engage with real-life situations to develop problem solving skills through working with their colleagues. The same strategies will promote enquiry and critical thinking skills among students (Martyn *et al.*, 2014: p. 822).

In Ghana, there is paucity of literature regarding the use of SCLA. Literature on undergraduate nursing students' knowledge, skills and attitude regarding student-centered learning approach is scarce. However, the structure of the curriculum for training nurses implicitly suggests the inclusion of elements of SCLA. Some of these SCLA elements comprise problem-based learning, project work and patient-care study or case-based learning. In case-based learning, a student applies a theory by choosing and offering practical care for patients within a specific period of time. The student is required to write a comprehensive report for evaluation and assessment by the Nursing and Midwifery Council for Ghana.

University of Health and Allied Sciences, Ho-Ghana, also uses the same curriculum that has the elements of SCLA in educating undergraduate nursing students. Therefore, their undergraduate nursing students are engaged in their learning activities through project work, group presentation of assignments as well as the writing of individual patient care study for final assessment by Nursing and Midwifery Council of Ghana.

The laudable reports on SCLA interested and prompted the researcher to assess how well-informed the undergraduate nursing students are regarding SCLA in a university in the Volta Region, Ghana. This study explored and described the knowledge, skills and attitude of the undergraduate nursing student regarding SCLA in the Volta Region, Ghana. It finally provides valuable information for improvement of SCLA.

1.3 Problem Statement

In these contemporary times, undergraduate nursing students are trained through SCLA although their previous education was conducted through a teacher-centered approach (Jacobs & Toh-Heng 2013: p. 9). Undergraduates from pre-tertiary schools to universities are faced with the difficulty of adjusting to the new concept of teaching and learning that they are not familiar with, and this could pose a challenge to their academic performance (Anderson *et al.*, 2016: p. 1). According to Campbell and Campbell (2008: p.7), most undergraduates were admitted on the premise that they have the pre-requisite skills and knowledge of teaching and learning in tertiary institutions. However, students possess diverse opinions, (life and academic experiences they bring to learning the environment) which impact on what and how they learn. In cases where the undergraduate students were not exposed to SCLA previously, their attitude towards SCLA was poor (Lea *et al.* 2003: p. 326). For one to be successful in both academic and professional education depends on the learning skills the individual student possesses. However, it has been observed that

nursing students lack the required learning skills that will help them succeed in their training to become nurses, the United Kingdom being an example (Barker *et al.*, 2016: p. 23)

Although several studies were carried out on student-centered approach in higher institutions, adequate studies to assess the undergraduate nursing students' knowledge, skills and attitudes regarding student-centred learning have not been done particularly in this study context Volta region Ghana. It is therefore necessary to determine the undergraduate nursing student's knowledge, skills and attitude regarding SCLA in order to inform new curriculum development processes.

1.4 Aim of Study

The aim of the study is to assess the knowledge, skills and attitude of the undergraduate nursing student regarding student-centered learning approach in a university in Volta Region, Ghana.



1.5 Research Objectives

- To assess the knowledge of undergraduate nursing students regarding the student-centered learning approach as described and applied in the school of nursing they are registered in.
- To assess the skills the undergraduate nursing students have regarding student-centered learning approach.
- To assess the attitude of the undergraduate nursing students regarding student-centered learning approach.

1.6 Operational Definitions

Student-centered learning: Collins and Brien (cited in Froyd and Simpsom, 2008), describe student-centered learning approach as a teaching and learning approach in which students influence what to learn, where to learn and control learning resources at their own pace. In this study, student-centered learning approach refers to teaching and learning methods in which the undergraduate nursing student is fully involved in his or her learning and assumes full responsibility for his or her academic progress.

Knowledge: the state of identifying a precise fact concerning a condition (Hornby, 2010: p 827). In this study knowledge refers to what the undergraduate nursing students know about student- centered learning approach as described and applied in the school of nursing they are registered in.

Skill: Skill is defined as the ability to do something well (Hornby, 2010: p. 1392). In this study skill means the ability and the techniques undergraduate nursing students employ to enhance their learning in the student-centered learning approach.

Attitudes: the way one behaves toward something that shows how one thinks and feels towards something (Hornby, 2010: p. 80). In this study, attitude denotes the way undergraduate nursing students behave towards student-centered learning approach.

1.7 Significance of the Study

The study will provide useful information on the knowledge, skills and attitude of the undergraduate nursing students regarding SCLA for action to be taken by the faculty. Secondly, nurse educators will utilise the findings of this study when formulating, reviewing or implementing curricula for undergraduate nursing students to empower the students for their academic and professional success. Furthermore, despite the significant recognition of the benefits of SCLA as the present acceptable way of teaching in higher

education worldwide, in Ghana there is rarity of literature on the concept. The information obtained from this study will help stir up future research regarding SCLA in Ghana.

1.8 Hypothesis

Undergraduate nursing students entering the University for the Nursing programme do not have functional knowledge, skills and have negative attitude regarding SCLA.

1.9 Research Design and Method

This study used exploratory descriptive quantitative approach as depicted in Table 1.1 below. Full details on this section are discussed in Chapter 3.

Table 1.1: Research design and method.

Variable	Application
Research design	Quantitative descriptive design
Research Setting	Volta Region, Ghana
Study Population	Undergraduate nursing students
Sampling	Stratified random sampling
Sample Size	248 respondents
Recruitment Strategy	Use of class list
Inclusion Criteria	All undergraduate nursing students
Data Collection Instrument	Structured self-administered questionnaire
Pilot Study	Twenty students
Data Collection Procedure	Researcher personally administered and collected the filled in questionnaire
Data Analysis	SPSS version 23, descriptive measures in frequency tables, pie chart, percentages and graphs, chi-square analysis
Validity	Instrument was scrutinized by experts for face and content whose validity is shown in Table 3.4.
Reliability	Instrument was tested and a coefficient score of 0.70 was obtained.
Ethics	Study was approved by the University of Western Cape Ethics committee. Permission was obtained from higher degree, ethics and clearance committee of participatory university.

1.10 Outline of Chapters

The study is divided into six chapters described as follows:

Chapter One: Overview of the Study.

Chapter Two: Literature Review.

Chapter Three: Research Methodology.

Chapter Four: Study Results

Chapter Five: The Discussion of the Findings of the Study.

Chapter Six: Conclusion, Recommendation and Limitation of the Study

1.11 Summary

This chapter has discussed the background to the study, problem statement, and significance of the study, hypothesis of the study aim and objectives of the study. A table presenting a summary overview of the research methodology was also presented.



CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Literature review refers to the exploration on a topic of interest to a researcher to ascertain what previous work has been done on this topic as well as the findings and new knowledge brought on board, and these are to guide the researcher (Streubert *et al.*, 2011: p. 25). This chapter presents a critical review of literature on SCLA to explore what is already known about the topic. Literature of both developing and developed countries relevant to the current study has been reviewed with particular attention to their findings and the methodology. A search was conducted through published journals, books and articles. The key areas reviewed include definitions and descriptions of what SCLA is, students' perception on SCLA, benefits of SCLA, other outcomes of SCLA and nursing education as well as SCLA. This study is supposed not to use literature older than five years as the researcher intended to report on current view. However, due to paucity of literature on the knowledge and skills students has regarding SCLA, the researcher has used two old literatures to argue out some points.

2.2 What is Student Centred Learning Approach?

Student-centered learning approach is described as having four key elements that help students to achieve academic and professional goals (Jobs for the Future and the Council of Chief State School Officers, 2015: p.2). The four key elements of the student-centered learning approach are: students personalize learning, student possessing their learning, student having learning abilities and learn at any moment irrespective of time and place. The four core elements are explained by Jobs for the Future and the Council of Chief State School Officers (2015: p.2) are as follows:

Personalize learning: student own their learning and make decisions on what they want to learn and experience at their own pace and interest.

Students have ownership over their learning: students manage their subject matter well and construct knowledge through logical reasoning and collaboration with peers.

Learning is competency based: students' progress depends on what knowledge the student is able to gain through their interaction with the learning environment with an evidence of reflecting on the performance.

Learning takes place anywhere, anytime: students utilize their time effectively and have a little interaction with the facilitator for guidance and feedback.

According to Harris *et al.* (2013: p. 22) SCLA, is defined as laying emphasis on the essential needs of learners at all levels of their education by adopting learning strategies that will support them in their learning and help them become leaders. Chen *et al.* (2015: p. 116), also define student-centered learning as the approach to teaching and learning in higher education that involves students in dynamic learning and logical reasoning. O'Neill and McMahon (cited in Bovill, 2015: p. 300) describe SCLA as 'a teaching and learning method that is dynamic and helps the learner to have control of his or her education, decide what to learn at a given time and place of choice under the guidance of the educator'. According to Imran *et al.* (2015: p. 337), the student-centered learning approach refers to the innovative teaching and learning method that has replaced the teacher-centered approach in this contemporary time when the learner independently chooses what and how to learn irrespective of time and place. Student-centered approach to education refers therefore to dynamic teaching and learning activities that consider the educational needs of each student and supports the students to improve their learning abilities (Harris *et al.* (2013: p.3). Greener (2015: p. 1), also considers SCLA to be a teaching and learning

strategy that reflects learning experiences which will motivate students to learn. SCLA is viewed by Hannafin *et al.* (2014: p. 641) as an approach to education that provides the opportunity to the individual to decide learning goals and how to achieve them. DiClementi and Handelsman (cited by Weimer, 2012: p. 440) also describe this student-centered approach as offering students the chance to be involved in the teaching and learning process.

2.3 Benefits of Student–Centred Learning Approach

The benefits of SCLA to the individual and general student body cannot be ignored as they have been widely reported in literature. Considering the changes in educational modules in higher institutions today, teaching and learning requires a drastic transformation from a traditional method to an innovative SCLA method in which students play a great role in their education (Onurkan *et al.*, 2016: p. 1). Considering the goal of education, it is impossible for students to progress in their education by rote learning which does not help them achieve the learning abilities and competencies required of them. SCLA, creative method for teaching and learning has the ability to help students to cultivate intellectual skills that promote life-long learning (Azer *et al.*, 2013: p. 433). Gould *et al.* (2015: p. 4), emphasize that in preparing students to develop to be independent within the current dynamic health care industry demands innovative teaching and learning approaches that actively involve them in their education to succeed.

Chapman *et al.* (2010: p. 820), have established that a learner-centered method to teaching and learning is more effective than the instructional teacher method and is essential for educational success in higher institutions of learning. SCLA is therefore a recognised teaching method in the current educational system which is advocated for adoption by higher educational institutions. This is because of its ability to involve students in their

learning process that can be applied in clinical practice to enhance self-directed lifelong learning in professional programmes (Baxter & Gray, 2010: p. 399). As stated by Mtika and Gate (2010: p. 396), the new dynamic teaching and learning strategy has been successful, evidenced by the high success rate established in the academic performance of students involved. It motivates students to approach their studies with zeal. As a matter of fact, education may become insignificant if students are denied playing great roles in their teaching and learning process. Denying students the opportunity to contribute to their education will affect their educational ambitions and misdirect their purposes of learning (Lin *et al.*, 2015: p. 156).

Hannafin and his team have found that contemporary teaching and learning strategies are structured according to learning theories that offer opportunities to students to take responsibility for their learning, establish their learning gaps, set their learning goals and construct their own knowledge (Hannafin *et al.*, 2014: p. 641). According to Poon (2013: p. 271), the continuous high enrolment of students in higher institutions has proposed positive ways and means of promoting students' learning abilities in tertiary education. The SCLA employed in teaching and learning in a university in Nottingham was found to be beneficial to the students by improving their learning skills.

Similarly, the educational sector in Malaysia has proposed and endorsed that their higher institutions adopt SCLA and integrate it with information technology to help students to become independent learners (Li *et al.*, 2014: p.65). Tadesse and Gillies (2015: p.13) have also found that students in the SCLA environment express their accomplishment from using the method because it helps them to interact with each other in their learning, and promotes their academic progress better than in the traditional method. Student-centered learning approach thus enables students to make analyses based on their understanding and

interest area which enhances critical thinking and the management of their education (Calder, 2015: p. 1122). With SCLA, students appreciate their performance, both individual and collective, and experience good educational outcome (Zhu, 2012: p. 134). According to Laguador (2014: p. 46), the performance of students in SCLA is the significant level of students' rich learning experience which helps them to gain much results from their education. The approach therefore promotes learners' active involvement of student in the learning process and enables students to achieve their academic goals.

It can also be safely concluded that SCLA engages students in the learning process and makes them responsible for their learning. It necessitates collaborative learning and uses the feedback given by peers to reflect on the quality performance for improvement. SCLA improves students' ability to match theory and practice successfully to make education meaningful (Spronken-Smith & Walker, 2010: p. 723). SCLA, therefore, is the ideal learning strategies that supports students' education and enables them to acquire the skills needed for constructing knowledge. Students become content, feel rewarded with SCLA and become accountable for their success in their education (Gurpinar *et al.* 2013: p. 85). According to MacKinnon and Young (2014: p. 8), SCLA promotes knowledge construction, development of skills and reflective practice for life-long learning as well as excellence in the field of practice. This innovative approach to learning encourages the collaborative learning that develops critical thinking abilities and reflective skills to solve problems in clinical practice (MacKinnon & Young, 2014: p. 8). SCLA places on the student the responsibility of controlling educational activities that promote knowledge acquisition (Tseng & Gardner, 2015: p. 536).

The implementation of SCLA in the undergraduate first-year course promotes student involvement and participation in the teaching and learning process; it also supports

students' communication skills. This teaching method allows students to determine what to learn with their peers and engage them in authentic exercises and virtually helps students to educate each other (Missingham & Matthew, 2014: p. 421). Likewise, McGarry *et al.* (2015: p. 972), emphasized that adopting a student-centered learning approach in educating students promotes active participation of the student in the learning process. In the new teaching and learning approach, educators only provide guidance to students and supports them to cultivate the desired critical thinking skills.

Mai *et al.* (2016: p. 361), also argue that the adoption of SCLA has a great influence on the content and the delivery strategy in the teaching and learning process where students integrate the knowledge acquired and their experiences to the real-life situations. The application of SCLA in higher institutions helps students to gain skills of reflection, self-appraisal and the ability to monitor individual academic progress. SCLA has the potential of helping students identify their educational strengths and weaknesses for improvement (Yang *et al.*, 2015: p. 225). The use of student-centered learning in higher educational programmes provides both students and academicians the opportunity for lifelong learning. Educators have recognized the benefit of SCLA and are determined to support students to become successful academically and professionally (Naude & Bezuidenhout, 2015: p. 221). Imran *et al.* (2015: p. 337), found that SCLA has become a preferred method in the educational field because it has brought great benefits to students, and this is evidenced by their good performance. Considering the dynamic transformation of education generally, it will be of a great advantage integrating SCLA with technology to promote student achievement in education (Chaudhry & Malik, 2014: p. 397).

The credible performance of students in an SCLA environment, has suggested that the approach is better and more helpful than the traditional instruction method (Barwani *et al.*,

2014: p. 93). The use of the student-centered learning strategy in undergraduate education has made students independent and the controllers of their lifelong learning (Chen *et al.*, 2015: p. 166). Armbruster *et al.* (2009: p. 203) have found that employing the student-centered learning method significantly promotes self-directed learning, student involvement, fulfilment and improvement in students' academic work. Establishing learning activities that places the student at the centre of education, directs the focus from teaching to learning and enhances the mental growth needed for students to be independent and logic in reasoning. The author adds that the European Student's Union Toolkit (ESUT) project was organised to prove the achievability and practicability of SCLA and its great benefit to students (Attard *et al.*, 2010: p. 2). Student-centered learning approach in this way has a positive influence on the development of cognitive skills in students and in assisting them to cultivate innovative ways of addressing problems as well as help them develop inquiry skills (Ahmet *et al.*, 2014: p. 1).

In the UK, students in the SCLA environment benefit from the method as they develop understanding, competence and learning skills. The students studied performed tremendously well academically under SCLA as compared to the traditional teacher controlled approach. The new approach provides evidence that SCLA increases students' success and offers them a good opportunity for excelling in both their academic and professional education (Bell, 2014: p. 285). Equally, Menzies *et al.* (2015: p. 1), have found that students tend to benefit from collaborative learning which is SCLA as students commit themselves to learning with their peers. Higher educational institutions therefore have the responsibility of employing innovative methods of teaching and learning to promote student learning experience.

2.4 Students' Perception about Student-Centred Learning Approach

SCLA has been perceived as the ideal method for result-oriented education by Chinese students. The concern was how to present the SCLA to all Chinese students for them to understand and accept as the innovative way of teaching and learning (Ann *et al.*, 2011: p. 203). The shift from lecture-based education to interactive and dynamic teaching in higher education is appreciated by students and they perceived that their active involvement in learning strategies influenced their learning positively (Lumpkin *et al.*, 2015: p. 121). Smit *et al.* (2014: p. 695), similarly, have observed that learners in the student-centered learning environment perceive that they are in-charge of their education and are motivated in their academic exercise. The students experience significant achievements which suggest that SCLA is a good method for teaching and learning in the present times. Lea *et al.* (2003: p. 326), also confirm that students appreciated the new approach to delivering instruction but their concern has been the sustenance of resources to execute the method. The students have expressed the positive effect of student-centered learning on their lives and the respect they gained in the sight of teachers. Equally, Gilboy *et al.* (2015: p.109), have found that the perception of undergraduate students on SCLA was positive. The students studied perceived that SCLA was more beneficial and appropriate compared to the traditional method. Both student and instructor were comfortable with it.

Hurney *et al.* (2014: p.55) found that, students in the SCLA setting view the method as a positive approach to education as it makes the students develop interest in peer collaboration in learning, assessment and project work. Both learners and teachers perceive SCLA as a good direction toward the achievement of educational goals. This benefit notwithstanding, learning resources and experienced teachers in SCLA are the challenges faced by the new approach (Qutoshi & Poudel, 2014: p.24). Harpe and Phipps (2008: p. 1) similarly indicated that students perceived SCLA as a helpful method that gives them

support and focus in their education. Students in higher institutions perceive SCLA as a means of developing a deep approach to learning and logical thinking abilities (Tseng & Gardner, 2015: p. 536)

2.5 Potential Outcome of Student-Centred Learning Approach

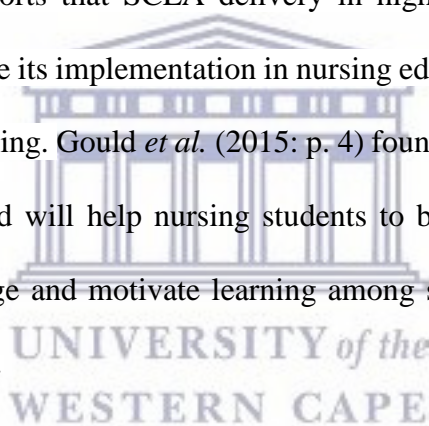
There are significant outcomes of SCLA which are worth mentioning. According to Tadesse and Gillies (2015: p.13), the shifting of attention on teaching from a traditional method to the learner-centered method has influenced students' attitude towards learning which portrays the success of the new approach. SCLA, it has been found, enhances the mental growth desired for students to be independently developed through the educational process and become critical thinkers (Armbruster *et al.*, 2009: p. 203). SCLA supports and empowers students in their learning and gives them fulfilment in their academic endeavour (Smit *et al.*, 2014: p. 695). Paterson *et al.* (2012: p.13) reveals that engaging students in their educational process is in the right direction to promote quality education, productivity, student success, self-esteem and the retention of knowledge acquired as well as commitment and teamwork. SCLA involves students in active learning, motivates self-assessment and promotes students' academic performance (Mostrom & Blumberg, 2012: p. 397). Students found in the SCLA environment control their leaning activities, improve their behaviour and learning experiences as well as develop higher order thinking abilities (Cheang, 2009: p. 42). Schiller (2009: p. 369), similarly reports that student-centered instruction has helped students to develop a good attitude toward learning because SCLA was easy to practice by all students surveyed.

2.6 Student-Centered Learning Approach and Nursing Education

SCLA has been lauded as a success in teaching and learning of many disciplines including nursing. In nursing, the commonly used SCLA are simulation learning, case-based

learning, project learning, problem-based learning, and collaborative learning. According to Chapman *et al.* (2010: p. 819) changing from the lecture method to a learner-centred approach is more effective than the instructional teacher approach for nursing education. Likewise, Horsfall *et al.* (2012: p. 933) also state that in contemporary times, nursing education needs teaching and learning methods that can influence the experience of nursing students and provide a strong base for quality nursing care. Yoo and Park (2015: p. 171) have identified that the most effective instructional method for building knowledge and problem-solving skills in undergraduate nursing student is SCLA.

SCLA integrated into nursing programmes, will elicit comprehensive education. McGarry *et al.* (2015: p. 972), reports that SCLA delivery in higher educational institutions is beneficial to students hence its implementation in nursing education will promote creative, dynamic and lifelong learning. Gould *et al.* (2015: p. 4) found that problem-based learning focuses on the student and will help nursing students to believe in themselves through learning with peers, engage and motivate learning among student nurses and help them gain autonomy in learning.



Smyth *et al.* (2012: p. 464) have identified that a SCLA strategy is capable of inspiring nursing students to be involved in developing their learning and practical experience for comprehensive care delivery. According to Shin *et al.* (2015: p. 591), SCLA promotes and helps undergraduate nursing students to become totally engaged in their learning opportunities to gain knowledge and build clinical ability. MacKinnon and Young (2014: p. 8), argue that SCLA has promoted excellence in nursing education by reinforcing learners' abilities to deliver excellent nursing care. The authors state that as health care professionals, education has been recognized as a key factor to improving quality care. Thus, application of result oriented teaching and learning methods that will provoke critical

thinking for effective practice is appropriate. Shin *et al.* (2015: p. 597) also report that currently, the clinical capability of graduate nurses is evaluated by the evidence of the clinical skill they have. Hence, the adoption of teaching and learning methods will support students to develop the required skills for clinical care.

Lin *et al.* (2015: p. 165) believe that the health care industry is confronted with difficult health issues that need technical knowledge, critical thinking and new approaches to address. The adoption of SCLA, reflective practice and real-life case studies by Taiwanese Baccalaureate Nursing School has improved learning and a sense of responsibility in the students. According to Mulube and Jooste (2014: p. 1790), a study on first year learner nurse perception and motivation in self-directed learning in the skills laboratory has revealed that the nursing students surveyed appreciated the method. Additionally, the authors suggest that if students are motivated in adopting self-directed learning strategies, they will be responsible for their learning, evaluate their performance, identify their weaknesses and organize strategies that will help them improve on their learning to achieve excellence. Krishnan (2015: p. 88) also states in his study on student-centered learning in a first-year undergraduate nursing course that, student subjects appreciated SCLA and were enthusiastic towards it because SCLA gives students the responsibility of collaborating with their peers in their learning. Zhang *et al.* (2012: p. 570) indicate that empowering undergraduate nursing students with SCLA to self-direct their own education creates positive attitude and skills which they need to deliver quality care. This was evidenced by the undergraduate students' great change in their performance and the students remarked that the method helped them to become critical thinkers.

2.7 Summary

The related literatures reviewed have explained the challenges faced with the traditional method of teaching, given a clear understanding of the student-centred learning approach concept. It also touches on the importance of strategies that really engage students to take responsibility for their own learning and the benefits of SCLA in these contemporary times.



CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the methodology used in conducting the study. It described the research design, research setting, the study population and sampling procedure, the instrument used for data collection, the data collection technique and data analysis procedure. Ethical consideration and rigour are also described.

3.2 Research Design

Research design refers to the overall strategy a researcher employs in carrying out a study (Brink *et al.*, 2012: p. 21). Quantitative descriptive design was employed to assess the knowledge, skill and attitude of the undergraduate nursing students regarding the student-centred learning approach (SCLA) being employed in a university in Volta Region, Ghana.

3.3 Quantitative Research

Quantitative research is an objective, systematic process using numerical data to obtain information about the world (Burns & Grove, 2009: p. 22). Quantitative research involves numbers being applied to the data gathered from the study and it uses graphs and frequency tables to analyse and interpret the results. The study design was quantitative because the structured questionnaire was used to gather information from respondents in the form of numerical data that was summarized and analysed by means of statistics. Therefore, frequency tables and graphs were used to present the findings in the study.


3.4 Descriptive Design

Descriptive research design enables a researcher to describe a phenomenon in its real situation (Burns & Grove, 2011: p. 256). The descriptive design was relevant to the study as it allowed the researcher to describe the knowledge, skills, and attitude of undergraduate

nursing students regarding SCLA in a university in the Volta Region of Ghana thus achieving the set purpose of the study.

3.5 Research Setting

Research setting refers to the particular place a researcher collects the data for his or her study (Brink *et al.*, 2012: p 59). The setting for this study was the school of nursing in a university in the Volta Region, Ghana. Ghana is a tropical country in West Africa made up of ten administrative regions. English is the official language of government, commerce and education, and is therefore the most prestigious code in use. English is available everywhere as the official language of the media, official public announcements and road signs among many others. It is therefore the medium of instruction in this country.

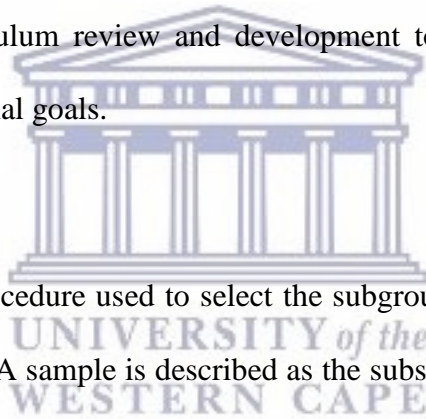


Beside Bachelor in Nursing and Midwifery programmes, the university also offers Medical Laboratory Practice, BSc Dietetics, BSc Speech and Language Therapy, BSc Physiotherapy, Medical Degree (MB ChB), Bachelor in Physician Assistantship (Clinical), BA in Public Health with options in Disease Control, Environmental Health, Health Information, Public Health Nursing, Mental Health, Public Health Nutrition and Health Promotion.

There are two stocked libraries for the entire university and internet assessment is not always available for both lecturers and students. The university was chosen because it uses elements of student-centred approach as their mode of teaching. Other good reasons will include, the enrolment of students for the first time and the size of the student population

3.6 The Study Population

The population for a study refers to the entire group of individuals or elements from which the researcher obtains his or her sample (Bijlani, 2008: p.26). In this study, the target population was the entire undergraduate nursing students pursuing the four-year nursing programme in a university in the Volta Region, Ghana. The total population of the undergraduate nursing students was four hundred and seventy-four (474) at the time of the research (2015/2016 academic year). The researcher's choice of the target population was informed by its appropriateness to this investigation as it is their first encounter with and exposure to student-centred learning approach (SCLA) in their lives as learners. Assessment of their knowledge, skills, and attitude regarding SCLA is therefore important in order to inform curriculum review and development to help students achieve their educational and professional goals.



3.7 Sampling

Sampling refers to the procedure used to select the subgroup of a population for a study (Bowling, 2014: p. 455). A sample is described as the subsection of a group of people or elements which represents a population the researcher is interested in (Bowling, 2009: p. 468).

3.8 Sampling Technique

Sampling technique is the method used in selecting participants for a study (Brink *et al.*, 2012: p. 142). Stratified random sampling was used as a technique to select the respondents in the study. According to Bowling (2009: p. 205), stratified sampling refers to the process of selecting a sample from the population according to the groups the people belong to, while random sampling means the process of selecting participants for a study in which each person has an equal chance of being selected from the study population (Creswell,

2014: p 249). The respondents were selected in proportion to the size of each stratum (year of study). The appropriate sample size was randomly selected using class lists for the first and second year students. However, for the third and fourth years, all the students were included considering their small numbers.

3.9 Sample Size

Using Raosoft sample size calculator to determine the sample size, with the error margin of 5% and confidence level of 95%, the sample size was 184 for the first and second year levels, but due to the inclusion of all of the students in the 3rd and 4th year levels, the final sample size was 248. The respondents were informed that if any of them wanted to opt out because he or she was not interested in the study he or she could do so, but no respondent opted out.

The sample size was calculated using the Raosoft Sample size calculator using the following formula:

$$x = Z(c/100)^2 r(100-r)$$

$$n = \frac{N \cdot x}{(N-1)E^2 + x}$$

$$E = \text{Sqrt} \left[\frac{(N-n)x}{n(N-1)} \right]$$

where N is the population size, r is the fraction of responses, and $Z(c/100)$ is the critical value for the confidence level c . With the confidence level at 95%, the margin of error at 5% and the response distribution of 50%, the total sample was calculated to be 248 from a population of 474. The proportional representation was then calculated for the first and second year level students at 123 and 61 respondents respectively. All 34 and 30 third and fourth year levels students were included due to their small numbers which brought the final sample size to 248. Table 3.1 below depicts the sampling frame for this study.

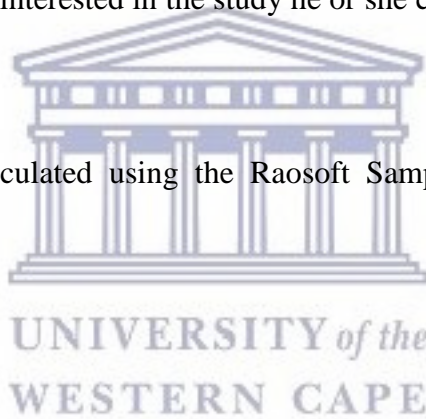
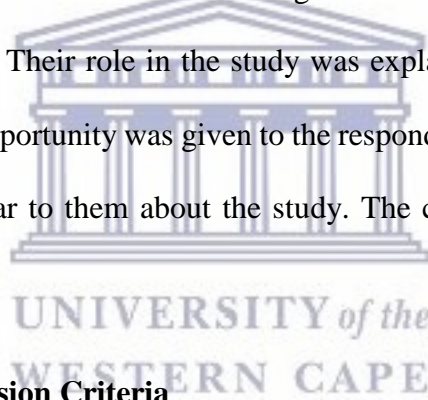


Table 3.1: Stratified study sample

Year of study	Number of students	Number of student sampled	Final sample size
First year	274	123	123
Second year	136	61	61
Third year	34	-	34
Fourth year	30	-	30
Total	474	184	248

3.10 Recruitment Strategy

Recruitment strategy refers to how the researcher got the respondents for the study (Streubert *et al.*, 2011: p. 113). The researcher got in contact with the respondents through their lecturers after permission had been granted by the higher degree and ethics committee of the participatory university and the dean of the school of nursing and midwifery of the university. The respondents were met according to their stratum (year of study) and informed about the study. Their role in the study was explained to them as well as their freedom to opt out. The opportunity was given to the respondents to ask for explanation on anything that was not clear to them about the study. The concerns and questions raised were addressed.



3.11 Inclusion and Exclusion Criteria

The criterion that stipulates the features the population must have is called an inclusion or eligibility criterion (Brink *et al.*, 2012, p. 106). The study included the entire undergraduate nursing students in the four-year nursing programme. All other undergraduate students in the university who were not on the nursing programme were excluded.

3.12 Data Collection Instrument

To generate data that are accurate and relevant to the study context and aligned to the study objective, a 38 item structured questionnaire was developed by the researcher (Appendix 3). Reviewed literature formed the basis for the phenomenon under study. A statistician and the supervisor were involved to ensure that the content of the questionnaire was

relevant and measured what was intended. Each section of the questionnaire had items that elicited responses using a variety of responses such as *yes* or *no* and *true* or *false*. Also, there was a 5 point Likert scale on which the respondents responded on a continuum; 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree; and 1 = Very poor, 2 = Below average, 3 = Average, 4 = Above average, 5 = Excellent. The 38 items on the questionnaire were arranged in four sections (A, B, C and D).

Section A: this part comprised of open and closed ended questions on demographic data which is nominal data.

Section B: this section is in four parts and answered objective one: to assess the knowledge of the undergraduate nursing student regarding SCLA.

B I: this part comprised two *yes* and *no* questions on the undergraduate nursing students' perceived knowledge on SCLA.

B II: in this part, we included four questions of less likely and most likely on the undergraduate nursing students' source of information on SCLA.

B III: this part also comprised five Likert scale questions of very poor, below average, average, above average and excellent which ask the undergraduate nursing students to rate their knowledge and understanding of SCLA.

B IV: this part had thirteen *true* and *false* questions which answered Objective One: *to assess the undergraduate nursing students' knowledge regarding SCLA*

Section C: in this part items comprised eleven Likert questions which addressed objective two that is: *to assess the skills of undergraduate nursing students have in SCLA.*

Section D: here we had eight Likert scale questions which answered Objective Three: *to assess the attitude of undergraduate nursing students toward SCLA*

The *yes* and *no* and *true* and *false* questions were coded 2 for positive answers and 1 for negative answers.

Table 3.2: Summary of questionnaire’s variables and questions

Variables	Questions
Prior knowledge before entering the university	1
Orientation to SCLA in the university	1
Source of information on SCLA	2
Rating of knowledge on SCLA	1
Understanding of SCLA	1
Knowledge of SCLA	13
Skills in SCLA	11
Attitudes towards SCLA	8

3.13 Pilot Study

A pilot study is very key and the researcher is obliged to test the instrument for data collection before using them. A pilot study is pre-testing the instrument on a small number of people to determine whether the instrument is valid to answer the research objectives (Bowling, 2009: p. 301). The pilot study was carried out in order to check for consistency of the instrument to ensure its validity. The questionnaire was pre-tested by administering it to 20 students from the different year levels in order to ensure reliability of the instrument. Stratified sampling was used to select the participants according to the stratum for the pretesting of the questionnaire. The first-year students were represented by 10 respondents, second year by 6 respondents, third and fourth year were represented by 2 respondents respectively. The first and second year students who participated in the pilot study were excluded in the main study. However, the third and fourth year groups who took part in the pilot study were included in the main study since excluding them would not give a good representation due to their small numbers. The pilot study was done to determine the clarity and the comprehension of the questionnaire. During the pilot study, respondents were encouraged to ask for explanation to questions that were not clear enough to them. Each

respondent spent 20 minutes to complete a questionnaire. The result showed that the tool was clear and good to answer the study objectives.

3.14 Data Collection Procedure

An ethical clearance letter was obtained from the Research Ethics Committee of the University of the Western Cape (Appendix 4). An approval to conduct the study was also obtained from the Research Ethics Committee of the university under study (Appendix 6) while the dean and lecturers of the School of Nursing and Midwifery of this same university were duly informed. The lecturers introduced the researcher to the students and the students were informed about the study, the purpose and the role the students needed to play in the study. The respondents' permission was sought after thorough explanation of the study by letting each student sign a consent form. Data collection was conducted from December, 2015 to February, 2016 mainly after class sessions. The completion of the questionnaire took the respondents averagely 20 minutes. The researcher administered the questionnaire to the respondents and collected each questionnaire after it had been filled, and enveloped it thereafter. The period for the data collection was interrupted by the schools break for holidays and the delayed return of some of the students to school.

3.15 Data Analysis

Data analysis refers to grouping, assembling, manipulation and concluding data and presenting it in a meaningful manner (Brink *et al.*, 2012: p.177). The data was gleaned and coded by allocating numerical values for the identification of errors. Thorough check was done to ensure that the questionnaires were answered as expected, before being entered for analysis using the Statistical Package for the Social Sciences (SPSS version 23). The questions that were not answered were noted. Tables and bar charts were used to explain the frequency measures and give general idea of the trends in the data. Knowledge score

was generated for true and false questions and a simple grading was constructed to show the measure of knowledge level as shown in Table 3.3.

For easy analysis of findings, five Likert scale of skills and attitude responses were coded into 3 Likert scales responses each. The five Likert scale skills responses of strongly agree, disagree, neutral, agree and strongly agree were coded into 3 Likert scale as agree, neutral and disagree. Five Likert scale attitude responses of excellent, above average, average, below average and poor were coded into 3 Likert scale responses as excellent, good and poor. In addition, inferential statistics such as Chi square tests were run to determine relationships between variables and for the prediction of factors impacting knowledge.

Table 3.3: Knowledge Score Scale

Knowledge score	Percentage (%)	Interpretation
0-6	25	Poor knowledge
7-12	50	Moderate knowledge
13 -18	75	Good knowledge
19-26	100	Excellent knowledge

3.16 Rigors of the Study

Rigour refers to the various important steps of the research procedure that help make the study authentic (Bowling, 2014: p. 160). Validity and reliability are study rigours associated with quantitative research approaches.

3.17 Validity of the Instrument

Validity refers to the extent to which a tool measures what it is designed to measure (Bowling, 2009: p. 470). It is therefore the responsibility of the researcher to ensure that the instrument is examined and found to be adequate to address the phenomenon under study. Three types of validity measures were done which included, face, content and construct validity types.

Face Validity is a subjective establishment that an instrument is suitable for achieving the desired information on the surface (Brink *et al.*, 2012: p 212). In this study, face validity was established by consulting the experts in nursing science education and my supervisor. The instrument appeared to be adequate for obtaining what was desired.

Content Validity refers to the extent to which an instrument measures what it is designed to measure (Brink *et al.*, 2012, p. 210). The researcher determined the content validity by means of presenting the questionnaire for review to the research ethics committee and the supervisor. Table 3.4 represents the measure of content validity for the questionnaire used.

Table 3.4: Content Validity Measure

Objectives	Items
Objective 1	Section BI: 1 Item Section BII: 4 Items Section BIII: 1 Item Section BIV: 13 Items
Objective 2	Section C: 11 Items
Objective 3	Section D: 9 Items

Construct Validity is the justification that an instrument measures the original idea of the study (Bowling, 2014: p. 175). The instrument was tested through a pilot study and found to support the hypothesis.

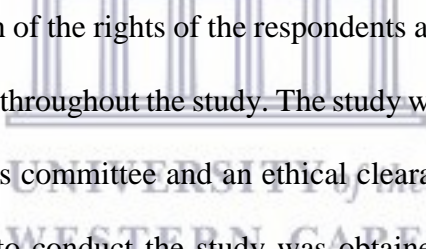
3.18 Reliability of the Instrument

Reliability refers to the degree to which the measure is reliable and reduces errors (Bowling, 2009: p. 468). The focus of reliability in quantitative research is the stability and consistency of the instrument. Stability of a questionnaire is the degree to which it gives similar results, if repeated at another time. The questionnaire was administered to a small group of respondents on two occasions, a week apart as the pilot study. The results were compared by calculating the reliability coefficient on the two sets of tests for each of the

parts of the questionnaire. A coefficient score of > 0.70 indicating a good reliability of instrument was realised.

Consistency of items was also checked with the use of Cronbach's alpha. The items within the instrument were constructed to ensure they were measuring similar or common constructs and correlate with each other and the degree of this correlation was determined. From the results of the pilot study, the internal consistency of the questionnaire was measured with the help of a statistician to compute Cronbach's Alpha coefficient of reliability. The average Cronbach's alpha obtained was 0.735 which suggested that the instrument was reliable as 0.70 or higher signifies the instrument is strongly correlated and the internal consistency is high.

3.19 Ethics



To safeguard the protection of the rights of the respondents and the institution, high ethical standards were maintained throughout the study. The study was approved by the University of the Western Cape Ethics committee and an ethical clearance duly received (Appendix 4). In Ghana, permission to conduct the study was obtained in writing from the higher degree and ethics committee of the participatory university (Appendix 5). The Dean of the School of Nursing and Midwifery of the university and the lecturers were duly informed and their permission sought get in contact with the students-respondents. The respondents were informed about the study, the purpose was explained to them and each signed a consent form after reading through the form. Subsequently, explanations for their pertinent questions were offered. With regard to adherence to human right principles, the following were also considered using the appropriate consent form:

Anonymity: This refers to the protection of research respondents so that no one can link the participants with the information given by them (Brink *et al.*, 2012: p. 37). To ensure

anonymity, the respondents' identities were not disclosed as the administered questionnaires did not request for name, telephone number or address of any respondent.

Beneficence: Beneficence is an important ethical principle which implies participants in a study are protected from all kinds of harm (Tappen, 2011: p. 444). It is the responsibility of the researcher to protect the respondents from any form of harm and from physical and mental discomfort in a study. In this study, the respondents were informed that the study would produce no obvious harm. However, should they experience any anxiety or stress during the study interactions they were to draw the attention of the researcher. No feedback of any such adverse effect of the study was received from any respondent whatsoever.

Confidentiality: This principle refers to the safeguarding of a research participant's personality from the outside world. Only the researcher knows the participants (Brink *et al.*, 2012: p. 209). This was ensured by coding all data collected so that individuals could not be identified by their responses. The results were only made available to the researcher, supervisor, and the statistician. All responses to the questionnaire were kept under lock and key in the office and away from any unauthorized persons.

Informed Consent: This means that the respondent is well informed about the study and can voluntarily agree to take part in a study or decline (Streubert *et al.*, 2011: p. 61). The consent of the respondents was sought after having fully informed them about the nature of the research, what was expected from them and the purpose of the study.

Respect for Persons: This refers to people's rights to independence and the privilege to be treated as autonomous beings. They were free to choose whether to participate in the study or not. The respondents were informed that participation in the study was voluntary and no one would be punished for their failure to participate. They were also

informed that they had the right to withdraw from the study or refuse to fill the questionnaire though they had already consented to participate. The respondents were allowed to voluntarily decide whether to participate or not.

Risks and Benefits: Here, it refers risk to the probability that the respondent may be harmed either physically or psychologically during the study. Benefit depicts possible gain either material or knowledge generated from the study to the populace and the participants in the study (Tappen, 2011: p. 448). In this study, the benefits outweighed the risks in the sense that there was no administration of treatment in the study. Also, the respondents were informed to report to the researcher if they experienced any discomfort or stress during the process of answering the questionnaire. Secondly, findings from the study would be communicated to the participants. Again, the findings will be used by educators when formulating, reviewing and implementing curricular of the undergraduates.

Scientific Integrity: This refers to the efforts of the researcher to avoid falsifying the data or any information in the study (Brink *et al.*, 2012: p 43). In this study, the researcher did not falsify the data or report which did not represent the views of the respondents. The researcher did not influence participants' responses to support or disprove the views held by the researcher. Efforts were also made to avoid plagiarism by referencing all sources of original works cited.

3.20 Summary

This chapter has described how the researcher used the chosen design: descriptive quantitative design to assess the knowledge of undergraduate nursing SCLA. This chapter discussed the research design, setting, population, sampling and sample size. Data collection instruments, the data collection process, pre-testing of the data collection

instruments, data processing and analysis. The researcher also discussed the observed ethical principles and rigour of the study. The next chapter presents the study findings.

CHAPTER FOUR

RESULTS

4.1 Introduction

This chapter presents the study results in narrations with tables and figures. A total of 248 undergraduate nursing students constituted the study. They all answered the questionnaire presented in the Appendix 3 of this document. Results are organized at the univariate, bivariate and multivariate levels.

4.2 Demographic Characteristics of the Undergraduate Nursing Students Studied

Table 4.1 summarises the frequency distribution of gender, nationality, language spoken and year of study of the respondents. Majority of the respondents were male 165 (65.3%) while 86 (34.7%) respondents were female. All the respondents were Ghanaian (100%). In terms of respondents' command over the English language, 140 (56.5%) could speak English very fluently and 108 (43.5%) could speak English moderately fluently. Ewe language could be spoken very fluently by 70 (28.2%), 31 (12.5%) could speak Ewe moderately fluently, 40 (16.1%) respondents could speak it less fluently, and 107 (68.5%) could not speak Ewe. With Ga language, 12 (4.8%) could speak it very fluently, 17 (6.9%) could speak it moderately fluently, 49 (19.8%) could speak it less fluently while 179 (68.5%) could not speak. Twi language could be spoken very fluently by 110 (44.4%), 68 (27.4%) could speak it moderately fluently, 38 (15.3%) less fluently and 32 (12.9%) could not speak Twi. Majority 123 (49.2%) of the respondents were in the first year, 61 (24.6%) were in the second, 34 (14.1%) were in the third year and 30 (12.1%) were in the fourth year.

Table 4.1: Socio-Demographic Characteristics of Undergraduate Nursing Students

Variables	Categories	Frequency	Percentage
Gender	Male	162	65.3
	Female	86	34.7
	Total	248	100.0
Nationality	Ghanaian	248	100.0
Fluency in English	Cannot speak	-	-
	Less fluent	-	-
	Moderately fluent	108	43.5
	Very fluent	140	56.5
	Total	248	100.0
Ewe language fluency	Cannot speak	107	43.1
	less fluent	40	16.1
	Moderately fluent	31	12.5
	Very fluent	70	28.2
	Total	248	100.0
Ga language fluency	Cannot speak	170	68.5
	Less fluent	49	19.8
	Moderately fluent	17	6.9
	Very fluent	12	4.8
	Total	248	100.0
Twi language fluency	Cannot speak	32	12.9
	less fluent	38	15.3
	moderately fluent	68	27.4
	very fluent	110	44.4
	Total	248	100.0
Year/level of study	Year One	123	49.2
	Year Two	61	24.6
	Year Three	34	14.1
	Year Four	30	12.1
	Total	248	100.0

4.3 Respondents' Prior Knowledge of SCLA and Orientation on SCLA

Table 4.2 displays the respondents' prior knowledge of SCLA before entering the university and orientation on SCLA. Two hundred and forty-six respondents answered the questions. About 90 (36.6%) stated that they had prior knowledge of SCLA, and 156 (63.4%) indicated that they had no prior knowledge of SCLA before entering the university. With regard to orientation on SCLA, 105 (42.7%) responded that they had orientation on SCLA and 141 (57.3%) responded they had no orientation on SCLA when they entered the university.

Table 4.2: Prior Knowledge and Orientation of SCLA

Variable	Categories	Frequency	Percentage
Prior Knowledge	Yes	90	36.3
	No	156	62.9
	Missing	2	0.8
	Total	248	100.0
Orientation	Yes	105	42.3
	No	141	56.9
	Missing	2	0.8
	Total	248	100.0

4.4. Respondents' Prior Knowledge Regarding SCLA before Entering the University According to Year of Study

Table 4.3 shows the percentage of respondents that had prior knowledge regarding SCLA before entering the university according to the year of study. Respondents in first year who had prior knowledge of SCLA before entering the university were 49 (39.8%) while 25 (41%) of respondents in the second year had prior knowledge before entering the university. In the third year, 14 (41.2%) had prior knowledge, and in the fourth year 13 (43.3%) had prior knowledge before entering the university.

Table 4.3: Respondents' prior knowledge regarding SCLA before entering the university according to year of study

Year	N	Frequency	Percentage
One	123	49	39.8
Two	61	25	41.0
Three	34	14	41.2
Four	30	13	43.3
Total	248	101	

4.5 Chi square of respondents' prior knowledge regarding SCLA before entering the university, according to year of study

Table 4.4 displays a Chi square test that was done to see the relationship between respondents' prior knowledge about SCLA and their year of study. As shown in the Table 4.4, respondents in Year one and two have significant differences between their prior knowledge regarding SCLA and their year of study. Year One has $0.021 < p < 0.05$, Year

Two has $0.021 < p = 0.05$ which are significant. Third and fourth year had no significant difference.

Table 4.4: Chi square test on prior knowledge regarding SCLA before entering the university according to year of study

Year of study	Prior knowledge			
	N	%	df	Sig
Year one	123	48.6	1	0.021
Year two	61	25.1	1	0.021
Year three	34	14.0	1	0.055
Year four	30	12.35	1	0.199

4.6 Correlation between Respondents' Prior Knowledge of SCLA and Orientation on SCLA

The result on Table 4.5 shows that 99 (72.26 %) of students neither had prior knowledge of SCLA before entering the university nor any orientation on SCLA when they entered the university, whereas 48 (44.44%) of respondents stated that they had some orientation on SCLA in the university. Thirty-eight (27.74%) of respondents specifically said they had some prior knowledge of SCLA before entering the university while 60 (55.56%) of respondents established that they indeed had both prior knowledge of SCLA and orientation on SCLA in the university. This result shows a significant correlation between prior knowledge of SCLA and orientation on SCLA with the p-value of $p < 0.001$

Table 4.5: Correlation between prior knowledge of SCLA and orientation on SCLA

Prior Knowledge of SCLA	Orientation on SCLA		Total
	No (%)	Yes	
No	99 (72.26)	48 (44.44)	147 (60.00)
Yes	38 (27.74)	60 (55.56)	98 (40.00)
Total	137 (100.00)	108 (100.00)	245 (100.00)
Pearson $\chi^2(1) = 19.4728$ $P = 0.000$			

4.7 Sources of Information on SCLA

Table 4.6 demonstrates the respondents' sources of information on SCLA. Those who responded their source information on SCLA was likely from friends were 85 (35.9%), 152 (64.1%) respondents stated that it was unlikely from friends. One hundred and three representing (44.0%) of the respondents indicated that their source of information was likely from students from high institutions while 133 (56%) of the respondents stated it was not likely. For information from teachers in high schools, 118 (50.9%) of the students responded it was likely, 114 (49.1%) responded it was unlikely. From the internet, 148 (63.2%) of the respondents responded it was likely and 86 (36.8%) responded it was unlikely they got information on SCLA form the internet.

Table 4.6 Source of information about SCLA

Source	Category	Frequency	Percentage
Through friends	Unlikely	152	61.3
	Likely	85	34.3
	Missing	11	4.4
	Total	248	100.0
Through students in high / secondary school	Unlikely	131	52.8
	Likely	103	41.5
	Missing	14	5.6
	Total	248	100.0
Through my high school teacher	Unlikely	114	46.0
	Likely	118	47.6
	Missing	16	6.5
	Total	248	100.0
Through internet	Unlikely	86	34.7
	Likely	148	59.7
	Missing	14	5.6
	Total	248	100.0

4.8 Respondents' Knowledge of SCLA

The items used to assess the knowledge of respondents were scored as demonstrated in Table 4.7. Generally, as depicted in the table the majority of the respondents responded positively to the items assessing their knowledge of SCLA. The overall score for the items used to assess their knowledge was 24.17. The item SCLA offers students the opportunity to become critical thinkers and analyser of information scored the highest percentage of 96.4%, the item 'students reflect on personal significance of what they learn' was the second highest score 94.0%. The item in SCLA students develop skills for long life living' also scored 93.5%. The least scoring items 66.9% and 69.4% respectively were SCLA is best described by facilitation of the teacher and the item. In SCLA there is less contact hours with the facilitator.



Table 4.7: Respondents' knowledge of SCLA

Variables			n	%	Mean	SD	N
1.	Students become owners of their learning in SCLA	True	227	91.5	1.92	.273	247
		False	20	8.1			
2.	SCLA offers students the opportunity to become critical thinkers and analysers of information	True	239	96.4	1.97	.177	247
		False	8	3.2			
3.	Students personalise their own learning	True	219	88.3	1.90	.299	243
		False	24	9.2			
4.	Student employ self-directed leaning in SCLA	True	209	83.3	1.85	.355	245
		False	36	14.5			
5.	In SCLA students develop skills for long life living	True	232	93.5	1.94	.239	247
		False	15	6.0			
6.	SCLA is best described by facilitation of the teacher	True	166	66.9	1.67	.469	246
		False	80	32.3			
7.	SCLA offers students the opportunity to develop academic and professional growth	True	227	91.5	1.92	.268	246
		False	19	7.7			
8.	In SCLA students determine their what they should learn at their own pace	True	187	75.4	1.76	.426	245
		False	58	23.4			
9.	Students can learn anywhere, anytime	True	215	86.7	1.87	.336	247
		False	32	12.9			
10.	Student evaluate their own academic progress	True	187	75.4	1.76	.428	246
		False	59	23.8			

11.	In SCLA students develop a deep approach to learning	True	229	92.3	1.93	.248	245
		False	16	6.5			
12.	Students reflect on personal significance of what they learn	True	233	94.0	1.95	.224	246
		False	13	5.2			
13.	In SCLA there is less contact hours with the facilitator	True	172	69.4	1.70	.457	244
		False	72	29.0			
Overall actual knowledge score					24.17	1.69	231

4.9 Respondents' Rating of Knowledge of SCLA

Figure 4.1 demonstrates the respondents' rating of their knowledge of SCLA using 5 Likert scale and the result was computed in percentages. About 21 (8.54%) of the respondents specified their knowledge of SCLA was excellent; 56 (22.76%) respondents stated that their knowledge of SCLA was above average, 117 (47.56%) rated their knowledge of SCLA to be average, 27 (10.98%) indicated that it was below average while 25 (10.16%) specified it was very poor.

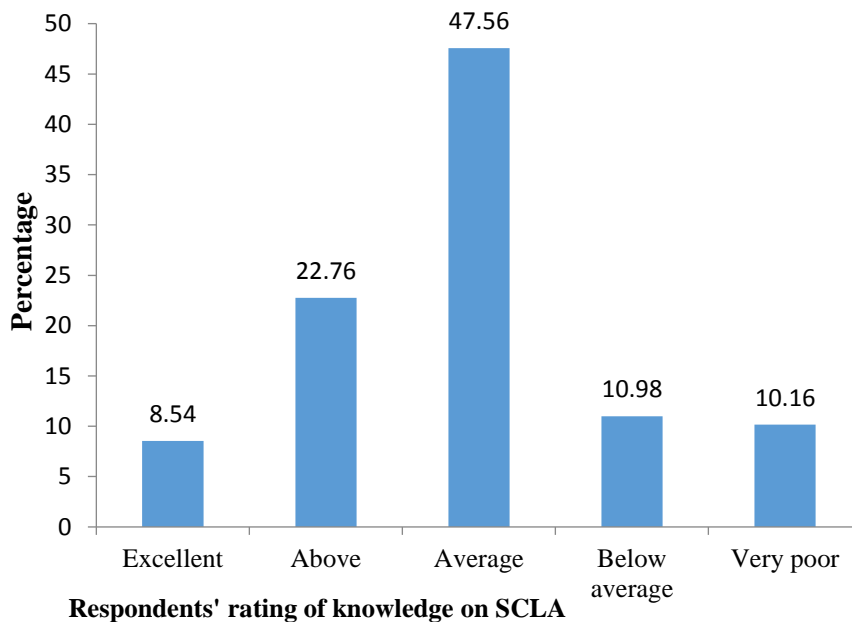


Figure 4.1: Respondents' rating of knowledge on SCLA

4.10 Respondents' Rating of Understanding SCLA

Figure 4.2 has shown how the respondents rated their understanding of SCLA. Twenty (8.13%) rated their understanding of SCLA as excellent; 62 (25.2%) rated it to be above average, 107 (43.5%) respondents rated their understanding of SCLA to be average, 37 (15.4%) respondents rated it below average while 20 (8.13%) rated their understanding of SCLA as very poor.

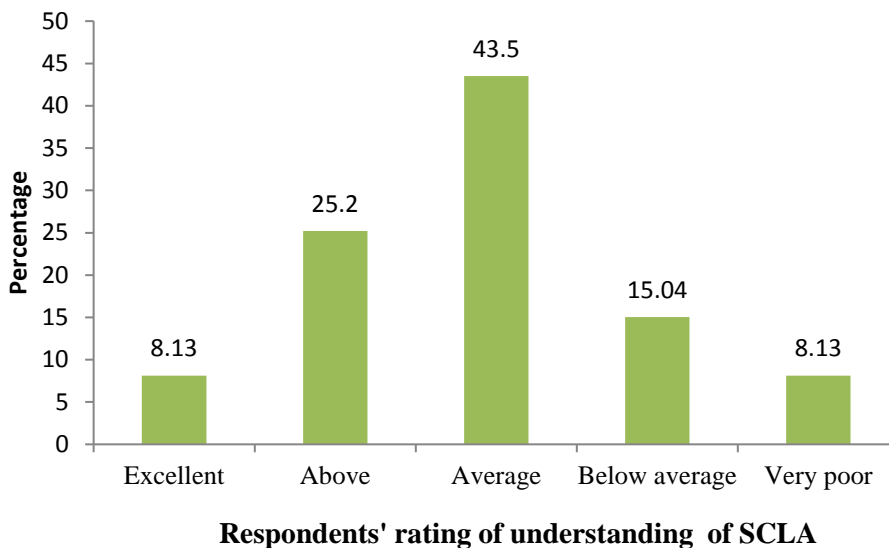


Figure 4.2: Respondents' rating of understanding of SCLA

4.11 Correlation between Rating of Knowledge of SCLA and Understanding of SCLA

Table 4.8 depicts the results of the relationship between the respondents' knowledge and understanding of SCLA. The relationship between the two variables was significant ($r = .708, p - 0.05$).

Table 4.8: Pearson's Correlation between rating of knowledge of SCLA and understanding of SCLA

Variable	Correlation	P - value	N
Rate your perceived knowledge of SCLA	.708	0.01	246
Rate your perceived understanding of SCLA			246

4.12 Respondents' Skills in SCLA

The results displayed in Table 4.9 represent the respondents' answers to the items assessing their skills in SCLA. Majority 196 (79%) of the respondents agreed to the statement that they were able to use the internet effectively; 196 (79.7%) stated they were good at e-learning; some 196 (79%) respondents indicated they could identify their learning needs and improve upon them and 126 (51%) indicated they were capable of using e-mail effectively in communication with their facilitators and mates. In a related development, some 176 (71%) of the respondents specified they could transfer theoretical knowledge acquired into clinical practice while another 208 (83.9%) indicated they could construct knowledge from books and materials read.

Table 4.9: Skills the respondents have in SCLA

Items	Categories	Frequency	Percentage
Able to use internet effectively to search for information and learning.	Disagree	23	9.3
	Neutral	29	11.7
	Agree	196	79.0
	Total	248	100.0
Can construct knowledge from books and materials read.	Disagree	17	6.9
	Neutral	23	9.3
	Agree	208	83.9
	Total	248	100.0
Able to write good student portfolio	Disagree	48	19.4
	Neutral	93	37.5
	Agree	103	41.5
	Missing	4	1.6
	Total	248	100.0
Use portfolio to monitor academic progress	Disagree	51	20.6
	Neutral	86	34.7
	Agree	103	41.5
	Missing	8	3.2
	Total	248	100.0
Can transfer theoretical knowledge acquired into clinical practice	Disagree	24	9.7
	Neutral	48	19.4
	Agree	176	71.0
	Total	248	100.0
Good in library search for information	Disagree	35	14.4
	Neutral	71	28.6
	Agree	141	56.9
	Missing	1	0.4

	Total	248	100.0
Can critically analyse information obtained from books and articles.	Disagree	16	6.5
	Neutral	55	22.2
	Agree	175	70.6
	Missing	2	0.8
	Total	248	100.0
Able to use relevant information from literature for my own leaning	Disagree	18	7.3
	Neutral	45	18.1
	Agree	181	73.0
	Missing	4	1.6
	Total	248	100.0
I am good at e-learning	Disagree	12	4.8
	Neutral	38	15.3
	Agree	196	79.0
	Missing	2	0.8
	Total	248	100.0
Capable of using e-mail effectively in communication with my facilitator and colleagues	Disagree	50	20.2
	Neutral	71	28.6
	Agree	126	50.8
	Missing	1	0.4
	Total	248	100.0
Can identify areas of my learning needs and improve upon them	Disagree	12	4.8
	Neutral	38	15.3
	Agree	196	79.0
	Missing	2	0.8
	Total	248	100

4.13 Respondents' Attitude towards SCLA

From Table 4.10, it is shown that generally the attitude of the undergraduate nursing students towards SCLA was good. Majority of the respondents indicated that their attitude toward SCLA was good in each of the items. In all, 195 respondents, making up (63.6 % respondents) stated their participation in group assignments was good while only 7 respondents (2.8%) stated it was poor. Regarding class presentation 173 respondents (69.8%) specified it was good, whereas 15 (6%) stated their class presentation was poor. About 192 (78%) of the respondent indicated that their accomplishment in SCLA was good while 12 (4.9%) indicated it was poor. Also, 188 (75.8%) of respondents rated how they utilize their free period as good, 19 (7.7%) rated it as poor, 185 (75.2%) respondents rated their involvement in SCLA as good whereas 25 (10.2%) indicated it was poor. With regard

to achievement in SCLA, 172 (70.5%) rated it good, 28 (11.5%) rated it poor, 181 (73.6%) rated how they use feedback from their facilitator to improve performance as good and 15 (6.1%) rated it poor and 175 (70.5%) rated their reflection on their studies as good while 12 (4.9%) indicated their reflection on their studies was poor.

Table 4.10: Respondents' attitude toward SCLA

Items	Categories	Frequency	Percentage
How will you rate your participation in group assignments?	Poor	7	2.8
	Good	157	63.6
	Excellent	83	33.6
	Total	247	100.0
How will you rate your participation in class presentations?	Poor	15	6.0
	Good	173	69.8
	Excellent	60	24.2
	Total	248	100.0
How will you rate your feeling of accomplishment in SCLA?	Poor	12	4.9
	Good	192	78.0
	Excellent	42	17.1
	Total	246	100.0
How will you rate how you utilize your free periods?	Poor	19	7.7
	Good	188	75.8
	Excellent	41	16.5
	Total	248	100.0
How will you rate your involvement in SCLA?	Poor	25	10.2
	Good	185	75.2
	Excellent	36	14.6
	Total	246	100.0
How will you rate achievement in SCLA?	Poor	28	11.5
	Good	172	70.5
	Excellent	44	18.0
	Total	244	100.0
How will you rate how you use feedback from your facilitator to improve your performance?	Poor	15	6.1
	Good	181	73.6
	Excellent	50	20.3
	Total	246	100.0
How will you rate reflection on your studies?	Poor	12	4.9
	Good	175	70.9
	Excellent	60	24.3
	Total	247	100.0

4.14 Summary

This chapter discussed the data analysis and the interpretation of the findings of the study with reference to the research objectives and reviewed literature. Considering the

hypothesis that undergraduate students entering the university to pursue nursing programmes lack functional knowledge regarding SCLA, the study found that the majority of the respondents had no knowledge. The chapter also discussed gender distribution, student respondents' according to year of study and the association between knowledge of SCLA and skills, and attitudes items of measurement as well as predictor of knowledge of SCLA. Chapter five discusses the findings of the study.



CHAPTER FIVE

DISCUSSION

5.1 Introduction

This chapter discusses the main findings and links them to the reviewed literature. The study focused on assessing the knowledge, skills and attitude of undergraduate nursing students regarding the student-centered learning approach (SCLA) at a university in Volta Region, Ghana. The main findings from the study were discussed in connection with the objectives of the study.

5.2 Gender Distribution of the Respondents

The majority of respondents in the study were male: a 64% male population against 36% female population. This great difference between the men and women is amazing because from the history of the nursing profession, the profession has been known to be a female dominated one. In this context of Ghana and in this very study, the increase of male nursing students might be due to fact that their failure to succeed in getting the programmes they desired to pursue made them to enter nursing. However, the finding is inconsistency with the study by Twomey and Meadus (2016: p. 86) which established that there is shortage of health care professionals globally and to address the issue there has been an appeal for male enrolment into the nursing profession but this plea yielded no good result. According to the authors, Canada has less than 7% of men in the nursing profession. However, the few male nurses who participated in that study indicated that they were content with their decision to be nurses and would freely encourage men to join the profession. Similarly, Penprase *et al.* (2015: p. 7), found that victimization of male nurses for their inability to care well for patients and show them sympathy began far back in the Florence Nightingale era though there is no scientific evidence. The authors found that men have a great ability for sympathy which is vital for recruiting men into the nursing career. The worldwide scarcity of female

nursing professionals necessitated the enrolment of males into the nursing profession. It was concluded by the authors that a decision to involve men in the nursing profession will solve the shortage of nurses and offer a great relief to humanity. A study by Adeyemi-Adelanwa *et al.* (2016: p. 143) also found that generally, people have unpleasant views about male nurses however, patients who benefited from their care have positive attitude towards them. The foregoing literature serves as possible explanations for the high proportion of male nursing students in this study.

5.3 Year of Study of Respondents

The respondents were sampled according to the strata of year of study. The findings revealed that there were more students 48.56% in the first year than in the rest of the study years. Student respondents in the second year of study were made up 13.71%; students in the third year were 24.6%, and the fourth-year students contributed 12.35% of respondents. This difference may be due to the fact that the beginning of every new thing is little, but as it grows it becomes big. The university chosen for the study was a newly established one (2012). Intakes in the earlier years were small but as the school grow the population increases.

5.4 Sources of Information on SCLA

The respondents identified the various sources of their information on SCLA. Most of the respondents (63.2%) showed that their source of information on SCLA was likely from the internet. This finding disagrees with Murdoch-Eaton and Whittle (2004: p. 576, p. 576) that the majority of students' respondents in their study reported little experience, especially in Information Technology (IT) skills such as emailing and using the Internet. Also, (44%) of the respondents indicated that their source of information on SCLA was probably from students in higher institutions. About half of the respondents (50.9%) indicated that their

source of information on SCLA was likely from their teachers in high school. The result implies that information technology plays a great role in learning and needs to be taught at lower levels of education since we live in a technological era when information is easily accessed through the internet. It is unfortunate that only 44% of the respondents received information on SCLA from high schools or secondary schools where the students need to be sensitised about teaching and learning in tertiary institution. This has a serious implication for their students if they remain ignorant of how teaching and learning takes place in higher institution till they enter university, especially if they do not get access to.

5.5 Respondents' Knowledge regarding SCLA

Respondents' knowledge of SCLA was objectively assessed using *Yes* or *No* questions of 13 items which were scored to be 26 with the minimum score of 13 which is outlined in Table 4.5. An overall score of 24.17 was recorded for this item. This infers that majority of respondents had some knowledge on SCLA. The current findings disagree with Lea *et al.* (2003, p. 326) who found that 60% of the undergraduate students were not familiar with the term SCLA. However, it might imply that progress with regards to introduction and sensitisation of students on SCLA has steadily over the years. Remarkably, 96.4% of the respondents specified that SCLA offers them the opportunity to become critical thinkers and analysers of the information they receive. This is in agreement with the findings of Murphy *et al.* (2011: p. 53), that as technology and social matters have changed, nursing education and practice have also changed. The traditional teaching method has changed to SCLA, being dynamic teaching–learning strategies that inspire students to engage in logical reasoning, critically analyse issues and develop abilities to make informed decisions in their field of practice. The result also confirms the report of MacKinnon and Young (2014: p. 8), which states that SCLA has promoted excellence in nursing education by helping educators to promote a student-centered learning environment. The innovative

learning strategy prepares learners to recognize their learning deficiencies as individuals and as health professionals regarding health care issues. The findings of Lin *et al.* (2015: p. 156), also confirms the result. The authors found that Taiwanese baccalaureate nursing students found case study teaching and learning strategies of SCLA to be very helpful. The students perceived that they become critical thinkers, active learners and have confidence in themselves as prospective professionals. The findings imply that majority of respondents did not have prior knowledge and orientation on SCLA when they entered the university. They became familiar with SCLA as they progressed in their study.

5.6 Respondents' Year of Study and Rating of Knowledge of SCLA

The quest of the researcher to have a good picture of the respondents' knowledge first made her test their level of knowledge and understanding of SCLA, though it was not one of the objectives. To ascertain the association between the current year of study and respondent's level of perceived knowledge, Chi - Square test was performed and there was a strong association: $\chi^2 = 17.85$ $p < .0001$. There is therefore a significant relationship between current year of study and respondents' level of knowledge of SCLA.

5.7 Year of Study and Level of Understanding of SCLA

Pearson's Chi-Square test was done to determine the relationship between respondents' level of perceived understanding and their year of study. The result demonstrated a strong relationship between respondents' level of perceived understanding and year of study $\chi^2 = 12.3$ $p = .006$. It can thus be concluded that there is a significant relationship between current year of study and respondents' level of understanding of SCLA.

5.8 Skills Respondents have in SCLA

The researcher presumed that for undergraduate nursing students studied to excel in their academic and professional endeavours they needed to possess skills that would enhance

their leaning. The findings suggest that the respondents had the skills in information technology. This finding is contrary to the findings of Murdoch-Eaton and Whittle (2004: p. 576) that majority of the students had little experience, especially in information technology (IT) skills such as email and the use of the Internet. The respondents' skill of using portfolios to monitor their academic progress also agrees with the report of Yang *et al.* (2015: p. 225) who believe that Portfolio, an SCLA strategy applied in higher education institutions in Hong Kong helped to develop the capabilities of students in organizing and monitoring their own learning in a technology-enhanced environment and helped students to reflect and evaluate their performance. Furthermore, this study revealed that respondents had critical thinking skills to analyse information obtained from books and articles. This discovery also confirmed the findings of Martyn *et al.* (2014: p. 822) that introducing SCLA into the nursing programme will promote enquiry and critical thinking skills in the students concerned. The finding however, did not support the report of Barker *et al.* (2016: p. 23) that nursing students in the United Kingdom lack the required learning skills that will help them succeed in their training to become nurses. The findings also support the report of Ahmet *et al.* (2014: p. 1) who have established that the student-centered approach to education helps student to cultivate confidence in themselves and progress in independent learning skills which augmented their inspiration towards learning.

5.9 Respondents' Attitude toward SCLA

Students in higher institutions where SCLA is the choice of teaching and learning have a positive attitude toward SCLA and these students take charge of their own learning (Şahin & KIŞLA, 2016: p.1). From this study, the findings related to attitude toward SCLA show that each item had the majority of respondents indicating that their attitude toward SCLA was good. The item how will you rate your feeling of accomplishment in SCLA had 78% of respondents rating it good, the item how will you rate your participation in group

assignment? had 63.6% of respondents rating it good; 33.6% respondents rated their participation in group assignment as excellent and 11.5% of the respondents rated their achievement in SCLA as poor. The finding is consistent with the report of Şahin and KIŞLA (2016: p. 1), that students of higher institutions have a positive attitude toward SCLA environments where student take charge of their own learning. A good number of 196 respondents also specified that they could identify their learning needs and improve upon them. This discovery also is in consonance with the findings of Hannafin *et al.* (2014: p. 641), that student-centered learning settings offer opportunities to the individual learner to define his or her learning goals and learning resources creating positive attitude from students. It also agrees with the finding of Missingham and Matthew (2014: p. 421) who argue that SCLA is student driven and enhances a rich learning process that promotes students' communication skills; therefore, it was well received by students. SCLA thus allows students to select what to learn with their peers and engage in authentic learning exercises and virtually teach themselves. The findings suggest that as the students advance in their study they develop positive attitudes toward SCLA and progress well.

5.10 Summary

Based on the hypothesis that undergraduate students entering university to pursue nursing programme lack functional knowledge, skills and attitude regarding SCLA, the study has found that majority of the respondent lack prior knowledge on SCLA before entering the university. The respondents had adequate knowledge, developed skills and attitude towards SCLA as they progressed in their study. However, there was a significant association between knowledge of SCLA and understanding of SCLA.

The next chapter presents the conclusion of the research findings and outlines recommendations from the study.

CHAPTER SIX

CONCLUSION AND RECOMMENDATION

6.1 Introduction

This chapter presents the key findings, the associated implications and recommendations. It also provides conclusion and limitations of the study. The purpose of the study was to assess the knowledge, skills and attitude of the undergraduate nursing students regarding SCLA in a university in Volta Region, Ghana. The following objectives guided the study:

- To assess the undergraduate nursing students' knowledge regarding SCLA
- To assess the skills the undergraduate nursing students have in SCLA
- To assess the attitude of the undergraduate nursing students toward SCLA

6.2 Summary of the Research Findings

The findings have with regard to the first objective established that less than half of the respondents had prior knowledge on SCLA before entering the university. About half of the respondents also rated their knowledge on SCLA as good albeit they lacked adequate understanding of SCLA.

The second objective also established that the respondents had good skill in SCLA which could enhance their performance. Their remarkable skills in IT, ability to construct knowledge from books and materials and the ability to identify learning gaps and improve on them can presuppose that their general knowledge on SCLA helped them develop these skills.

Findings related to the third objective revealed that the respondents had a positive attitude towards SCLA. Respondents could use feedback from their facilitators to improve on their performance and were well involved in SCLA.

The findings confirm the hypothesis that the undergraduate students entering the university for the Nursing Programme do not have functional knowledge of SCLA, but had skills and a positive attitude regarding SCLA.

6.3 Recommendations from this Study

The following recommendations are made to improve SCLA in tertiary institutions in Ghana.

6.3.1 Ghana Education Service

- Globally, the preference for SCLA innovative teaching and learning strategy has gained recognition. However, not all tertiary institutions understand and adopt the new approach to teaching and learning. The awareness creation of the potential benefits should be started in senior secondary schools by the Ghana Education Service.
- The Ghana education service should ensure that resources like well-equipped libraries with adequate computers are available to promote SCLA in tertiary institutions.
- Workshops should be held in tertiary institutions to educate lecturers on SCLA.

6.3.2 Participatory university

- All undergraduate students entering the university to pursue nursing and midwifery programmes as well as other programmes in the university should be orientated to SCLA during their general orientation period to be familiarise with how teaching and learning is organised in tertiary institutions.
- Resources like well stocked libraries and internet access which support effective implementation of SCLA should be expanded in the participatory university.

- Lecturers should be given comprehensive information on SCLA so that they can apply it well to the benefit of the students.

6.3.4 Recommendations for future research

- As SCLA has become the accepted teaching and learning method worldwide, lectures knowledge, understanding and skill in SCLA should be assessed.
- Research that focuses on the availability of the resources for implementing SCLA should be promoted.
- Future studies to assess the knowledge, skills and attitude of undergraduate students should be extended to the rest of the students in the participating university of this study.
- A qualitative study to explore the experiences of the undergraduate nursing students regarding SCLA should be done.

6.3.5 Recommendations for nursing education

- Curriculum for nursing education should be structured to involve teaching and learning activities that will engage the students.
- Student oriented strategies should be employed in teaching and learning.
- Current technological education like e-learning should be adopted.
- Students should be orientated to SCLA when they enter the university.

6.4 Conclusion

The study attempted to assess the knowledge, skills and attitude of the undergraduate nursing students regarding the Student-Centered Learning Approach (SCLA). The findings suggested that most of the undergraduate nursing students in the participating university did not have functional knowledge of SCLA before entering the university. However, as they progress in their study from one level of study to another, they became exposed to

SCLA and develop skills and a positive attitude towards SCLA. Promoting SCLA in nursing education programmes will enhance lifelong learning and generate knowledgeable and critical thinking nurses that will be able to manage the complex health issues in the constantly changing healthcare industry.

6.5 Limitations of the Study

The main limitation of this study is that it reflects the status of only nursing students of the university and cannot be generalised to other students in the university. Also, it was only one university that was used in the study and therefore generalisation of findings is limited to the participating university nursing students. The results therefore need to be considered with caution, as they may not be representative of all nursing students in the Volta Region and nursing students in universities in Ghana.

Lastly, the researcher missed the age in the demographic information of the respondents in the questionnaire which could not allow her to assess the influence of age on the knowledge, skills and attitude regarding SCLA. However, reviewed literature did not suggest age as a factor influencing SCLA though, having it in this study would have been good to test for that.

REFERENCES

- Adeyemi-Adelanwa, O., Barton-Gooden, A., Dawkins, P. and Lindo, J. L. (2016) 'Attitudes of patients towards being cared for by male nurses in a Jamaican hospital', *Applied Nursing Research*, 29, pp. 140-143.
- Ahmet Güneyli, A. and Zeki, P. C. (2014) 'Student Teachers' Perceptions about their Experiences in a Student Centred course', *South Africa Journal of Education*, 34n.3 Pretoria.
- Anderson, D., Wason, H. and Southall, J. (2016) Supporting business students' transition into higher education: the case of marketing downloads. *Teaching in Higher Education*, pp.1-12.
- Ann, H., Hua, Z. and Ros, O. (2011) 'Student Autonomy and awareness: vocational education and student-centred learning in China', *Journal of Vocational Education and Training*, 63(2), pp. 191-203.
- Armbruster, P., Patel, M., Johnson, E. and Weiss, M. (2009), Active Learning and Student-centered Pedagogy Improve Student Attitudes and Performance in Introductory Biology. *CBE Life Sci Educ.* 2009 Fall; 8(3), pp. 203–213.
- Attard, A. Geven, E.K and Santa, R. (2010) Student-centred Learning: Toolkit for students, staff and Higher Education Institutions, *European Students' Union (NJI)*
- Azer, S. A., Guerrero, A. P. and Walsh, A. (2013) 'Enhancing learning approaches: practical tips for students and teachers', *Medical teacher*, 35(6), pp. 433-443.
- Baeten, M., Kyndt, E., Struyven, K. and Dochy, F. (2010) 'Using student-centred learning environments to stimulate deep approaches to learning: Factors encouraging or discouraging their effectiveness', *Educational Research Review*, 5(3), pp. 243-260.
- Barker, C., King, N., Snowden, M. and Ousey, K., (2016). Study time within pre-registration nurse education: A critical review of the literature. *Nurse Education Today*, 41, pp.17-23.
- Barwani, T. A., Humaidi, S. and Mekhlafi, A. (2014) 'Learner-Centred Instruction in Pre-Service Teacher Education: Does it Make a Real Difference in Learners' Language Performance', *International Journal of Education*, 6(4), ISSN 1948-5476.
- Baxter, S., and Gray, C. (2010) 'The application of student-centred learning approaches to clinical education', *International Journal of Language and Communication Disorders*, 36(1),
- Bell, R. (2014) 'The continuing search to find a more effective and less intimidating way to teach research methods in higher education', *Innovations in Education and Teaching International*, (ahead-of-print), 1-11.
- Bijlani, R.L. (2008) Medical Research, *All you want to know but did not know whom to ask*, Jaypee Brothers Medical Publishers (P) Ltd.

- Bovill, C. (2015) Learner-centred education in international perspective, whose pedagogy for whose development? *International Journal for Academic Development*, 20(3), 300-302
- Bowling, A. (2009) Research Methods in Health. *Investigation Health and Health Services*. 3rd Ed. Open University Press, McGraw-Hill Education.
- Bowling, A. (2014) Research Methods in Health. *Investigation Health and Health Services*. 4th Ed. Open University Press. McGraw-Hill Education.
- Brink, H. Van der Walt C. and Rensburg G. (2012) *Fundamentals of Research Methodology for Healthcare Professionals*. 3rd Ed. Juta and Company Ltd.
- Burns, N. and Grove, S.K. (2011). *Understanding Nursing research: Building an evidence based practice*. New York: WB Saunders.
- Burns, N. and Grove, S.K. (2009) *The Practice of Nursing Research. Appraisal, Synthesis, and Generation of Evidence*, 6th Ed. St. Louis: Saunders Elsevier.
- Calder, N. (2015) Student wonderings: *Scaffolding student understanding within student-Centered inquiry learning*, *ZDM*, 47(7), pp.1121-1131.
- Campbell, L. and Campbell, B. (2008) *Mindful learning: 101 proven strategies for student and teacher success*. Corwin Press.
- Chambers, D., Thiekötter, A., and Chambers, L. (2013) 'Preparing student nurses for contemporary practice: The case for discovery learning', *Journal of Nursing Education and Practice*, 3(9), p. 106.
- Chang, S.F. (2013) 'Constructing and validating a global student-centered nursing curriculum learning efficacy scale: a confirmatory factor analysis', *Nurse Education Today*, 33(10), pp. 1173-1178.
- Chapman, H., Chiang, C. K. and Elder, H. (2010) 'Changing to learner-centered education challenges experienced by nurse educators', *Nurse Education Today*, 30(8), pp. 816-820.
- Chaudhry, M. Y. and Malik, A. (2014) 'Intersection of pedagogy and emerging technologies to enhance student-centred learning in higher education. *Pakistan Journal of Social Sciences (PJSS)*, 34(2), pp. 397-407.
- Cheang, K.I., (2009). Effect of learner-centered teaching on motivation and learning strategies in a third-year pharmacotherapy course. *American Journal of Pharmaceutical Education*, 73(3), p.42.
- Chen, J., Zhou, J., Sun, L., Wu, Q., Lu, H., and Tian, J. (2015). A new approach for laboratory exercise of pathophysiology in China based on student-centered learning. *Advances in physiology Education*, 39(2), 116-119.

- Creswell, J.M. (2014). *Research Design. Qualitative, Quantitative & Mixed Methods Approaches*. Fourth Edition. Sage
- Froyd, J. and Simpson, N. (2008) Student-centered learning addressing faculty questions about student centered learning. In *Course, Curriculum, Labor, and Improvement Conference, Washington DC*, 30 (11).
- Gilboy, M. B., Heinerichs, S. and Pazzaglia, G. (2015) Enhancing student engagement using the flipped classroom. *Journal of Nutrition Education and Behavior*, 47(1), 109-114.
- Gould, B. H., Brodie, L., Carver, F. and Logan, P. (2015) Not just ticking all the boxes. Problem based learning and mental health nursing, A review, *Nurse Education Today*, 35(10), pp. 1e-e5.
- Greener, S. (2015) What do we mean by “student-cantered” learning? *Interactive Learning Environments*, 23(1), pp. 1-2.
- Gurpinar, E. Kulac, E., Tetik, C., Akdogan, I. and Mmakli, S. (2013) Do learning approaches of medical students affect their satisfaction with problem-based learning? *Advances in physiology education*, 37(1), pp. 85-88
- Hannafin, M. Hill, J., Land, S. and Lee, E. (2014) Student-centered, open learning environments: Research, theory, and practice. In *Handbook of research on educational communications and technology*, Springer New York, pp. 641-651.
- Harpe, S.E. and Phipps, L.B., (2008) Evaluating student perceptions of a learner-centered drug literature evaluation course, *American journal of pharmaceutical education*, 72(6), p. 1.
- Harris, J., Spina, N., Ehrich, L.C. and Smeed, J. (2013). Literature review: Student-centered schools make the difference.
- Hornby, A.S. (2010) *Oxford Advanced Learner’s Dictionary*. 8th Ed. Oxford University Press
- Horsfall, J., Cleary, M. and Hunt, G. E. (2012) ‘Developing a pedagogy for nursing teaching learning’, *Nurse education today*, 32(8), pp. 930-933.
- Hurney, C., Harris, N., Bates Prins, S. and Kruck, S.E. (2014) ‘The impact of a learner-centered, mid-semester course evaluation on students’, *The Journal of Faculty Development*, 28(3), pp. 55-62.
- Imran, H., Belghis-Zadeh, M., Chang, T.W. and Graf, S. (2015) Toward recommending learning tasks in a learner-centered approach. In *Emerging Issues in Smart Learning*, Springer Berlin Heidelberg, pp. 337-344.
- Jacobs, G. M., and Toh-Heng, H. L. (2013) Small steps towards student-centered learning. In *Proceedings of the International Conference on Managing the Asian Century*, Springer Singapore, pp. 55-64.

- Jobs for the Future & the Council of Chief State School Officers. (2015). *Educator Competencies for Personalized, Learner-Centered Teaching*. Boston, MA: Jobs for the Future.
- Johansen, E., Harding, T. and Ljosaa, T.M. (2012) 'Norwegian nurses' experiences with blended learning: An evaluation study', *International Journal of Media, Technology and Lifelong Learning*, 8(1), pp. 54-70.
- Jordan, L., Bovill, C., Othman, S.M., Saleh, A.M., Shabila, N.P. and Watters, N. (2014) Is student-centered learning a Western concept? Lessons from an academic development programme to support student-centered learning in Iraq. *Teaching in Higher Education*, 19(1), pp. 13-25.
- Khalaila, R. (2014) 'Simulation in nursing education: An evaluation of students' outcomes at their first clinical practice combined with simulations', *Nurse Education today*, 34(2), pp. 252-258.
- Krishnan, S. (2015) 'Student-centered learning in a first-year undergraduate course', *International Journal of Learning, Teaching and Educational Research*, 11(2), 88-95.
- Laguador, J.M. (2014) 'Cooperative learning approach in an outcomes-based environment', *International Journal of Social Sciences, Arts and Humanities*, 2(2), pp. 46-55.
- Lea, S. J., Stephenson, D. and Troy, J. (2003). Higher Education students' altitude to student-centered learning: Beyond educational bulimia? *Studies in Higher Education* 28(3), 321-334
- Li, Y.W., Mai, N. and Tse-Kian, N. (2014) Impact of learner-centered teaching environment with the use of multimedia-mediated learning modules in improving learning experience, *Jurnal Teknologi*, 68(2), pp. 65-71.
- Lin, C. C., Han, C. Y., Pan, I. J. and Chen, L. C. (2015) The teaching-learning approach and critical thinking development: A Qualitative Exploration of Taiwanese Nursing Students. *Journal of Professional Nursing*, 31(2), pp. 149-157.
- Lumpkin, A., Achen, R. M. and Dodd, R. K. (2015) 'Student perceptions of active learning', *College Student Journal*, 49(1), pp. 121-133.
- MacKinnon, K. O. and Young, L. E. (2014) Story based learning: A student centered practice-oriented learning strategy. *Quality Advancement in nursing education-avancées en formation infirmière*, 1(1), pp. 3.
- Marangoni, A. and Haley, R., (2016). Serving an International Higher Education Partner Using a Problem-Based Learning Format. *Handbook of Research on Effective Communication in Culturally Diverse Classrooms*, pp. 375.

- Martyn, J., Terwijn, R., Kek, M. Y., and Huijser, H. (2014) 'Exploring the relationships between teaching, approaches to learning and critical thinking in a problem-based learning foundation nursing course', *Nurse education today*, 34(5), pp. 829-835.
- McCabe, A. and O'Connor, U. (2014) 'Student-centered learning: the role and responsibility of the lecturer', *Teaching in Higher Education*, 19(4), pp.350-359.
- McGarry, B. J., Theobald, K., Lewis, P. A., and Coyer, F. (2015) Flexible learning design in curriculum delivery promotes student engagement and develops metacognitive learners: An integrated review. *Nurse Education Today*, 35(9), pp. 966-973.
- Menzies, V., Tredinnick, J. and Van Ryt, C. (2015) Practices to enhance peer program implementation integrity to safeguard peer leaders and learners.
- Missingham, D., and Matthews, R. (2014) A democratic and student-centered approach to facilitating teamwork learning among first-year engineering students: a learning and teaching case study, *European Journal of Engineering Education*, 39(4), pp. 412-423.
- Mostrom, A. M. and Blumberg, P. (2012) Does learning-centered teaching promote grade improvement? *Innovative Higher Education*, 37(5), pp. 397-405.
- Mtika, P. and Gates, P. (2010) Developing learner-centered education among secondary Trainee teachers in Malawi: The dilemma of appropriation and application. *International Journal of Educational Development*, 30(4), pp. 396-404.
- Mubule, S. M. and Jooste, K. (2014) First year Learner Nurse Perception of Learning: Motivation in self-directed Learning in simulated skill laboratory at a Higher Institution. *South African Journal of Higher Education*, 28(6), pp. 1776-1794.
- Murdoch-Eaton, D. G. and Whittle, S. R. (2004) Lifelong learning skills: how experienced are students when they enter medical school? *Medical Teacher*, 26(6), pp. 576
- Murphy, S., Hartigan, I., Walshe, N., Flynn, A.V. and O'Brien, S. (2011) 'Merging problem-based learning and simulation as an innovative pedagogy in nurse education', *Clinical Simulation in Nursing*, 7(4), pp. 141-148.
- Naude, L. and Bezuidenhout, H (2015) Moving on the continuum between teaching and learning: communities of practice in a student support programme. *Teaching in Higher Education*, 20(2), pp. 221-230.
- Onurkan Aliusta, G. and Özer, B. (2016) Student-centered learning (SCL): roles changed? *Teachers and Teaching*, pp.1-14.
- Paterson, A. S., Jackson, W. J., and Grieve, A. P. (2012) *The Enhancement of Generic Competencies through the Application of Student Centred Learning: The Student Perspective*. Accountancy Research Group, Heriot Watt University.

- Penprase, B. *et al.* (2015) "Do higher dispositions for empathy predispose males toward careers in nursing? A descriptive correlational design", *Nursing Forum Wiley Online Library*, pp. 1.
- Poon, J. (2013) Blended learning: An institutional approach for enhancing students' learning experiences. *Journal of Online Learning and Teaching*, 9(2), p. 271.
- Qutoshi, S. B. and Poudel, T. (2014) Student Centered Approach to Teaching: What Does it Mean for the Stakeholders of a Community School in Karachi, Pakistan? *Journal of Education and Research*, 4(1), pp. 24-38.
- Robinson, B. K. and Dearmon, V. (2013) Evidence-based nursing education: Effective use of instructional design and simulated learning environments to enhance knowledge transfer in undergraduate nursing students. *Journal of Professional Nursing*, 29(4), pp.203-209.
- Sadlo, G. (2016) 'Using problem-based learning during student placements to embed theory in practice', *International Journal of Practice-based Learning in Health and Social Care*, 2(1), pp. 6-19.
- Şahin, M. and KIŞLA, T. (2016) "An Analysis of University Students' Attitudes towards Personalized Learning Environments", *Turkish Online Journal of Educational Technology*, 15(1), pp. 1.
- Samarakoon, L., Fernando, T., Rodrigo, C. and Rajapakse, S., (2013) Learning styles and approaches to learning among medical undergraduates and postgraduates. *BMC Medical Education*, 13(1), p.1.
- Savery, J. R. (2015) Overview of problem-based learning: Definitions and distinctions. *Essential Readings in Problem-Based Learning: Exploring and Extending the Legacy of Howard S. Barrows*, 5.
- Schiller, S. Z. (2009) Practicing learner-centered teaching: Pedagogical design and assessment of a Second Life project. *Journal of Information Systems Education*, 20(3), p.369.
- Shin, H., Sok, S., Hyun, K. S., and Kim, M. J. (2015) 'Competency and an active learning programme in undergraduate nursing education', *Journal of Advanced Nursing*, 71(3), pp. 591-598
- Smit, K., de Brabander, C. J. and Martens, R. L. (2014) Student-centred and teacher-centred learning environment in pre-vocational secondary education: Psychological needs and motivation. *Scandinavian Journal of Educational Research*, 58(6), pp. 695-712.
- Smyth, S., Houghton, C., Cooney, A. and Casey, D. (2012) Students' experiences of blended learning across a range of postgraduate programmes, *Nurse Education Today*, 32(4), 464-468

- Spronken-Smith, R. and Walker, R. (2010) Can inquiry-based learning strengthen the links between teaching and disciplinary research? *Studies in Higher Education*, 35(6), pp. 723-740.
- Stanley, M. J. C. and Dougherty, J. P. (2010) 'A paradigm shift in nursing education: A new model. *Nursing Education Perspectives*', 31(6), pp. 378-380.
- Streubert Speziale, H. J. and Carpenter, D. R. (2011) *Qualitative Research in Nursing. Advancing the Humanistic Imperative*. 5th Ed. Lippincot Williams and Wilkins.
- Tadesse, T. and Gillies, R. M. (2015) Nurturing Cooperative Learning Pedagogies in Higher Education Classrooms: Evidence of Instructional Reform and Potential Challenges. *Current Issues in Education*, 18(2), p. 13
- Tappen, R. M. (2011) *Advanced Nursing Research: From Theory to Practice*. U.S. A.
- Tseng, H. and Gardner, T. (2015) March. Assessing Learner-Centered Learning: Learners' Motivation, Learning Strategies and Critical Thinking Skills. In *Society for Information Technology & Teacher Education International Conference*, 2015(1), pp. 533-537.
- Twomey, J.C. and Meadus, R. (2016) "Men Nurses in Atlantic Canada Career Choice, Barriers, and Satisfaction", *the Journal of Men's Studies*, 24 (1), pp. 78-88.
- Weimer, M. (2012) *Learner-centered teaching and transformative learning. The handbook of transformative learning: Theory, research, and practice*, pp. 439-454.
- Williams, B. (2015) 'Using creative and contemporary teaching strategies to promote emancipation, empowerment and achievement in undergraduate paramedic students—a personal reflection', *Australasian Journal of Paramedicine*, 4(2), pp.
- Yang, D., Ngai, A. C. Y. and Hung, H. K. (2015) Students' perception of using eportfolios for learning in higher education. In *New Media, Knowledge Practices and Multiliteracies*, Springer Singapore, pp. 225-233.
- Yoo, M.S. and Park, H.R. (2015) Effects of case-based learning on communication skills, problem-solving ability, and learning motivation in nursing students. *Nursing & Health Sciences*, 17(2), pp. 166-172.
- Zhang, Q., Zeng, T., Chen, Y. and Li, X. (2012) 'Assisting undergraduate nursing students to learn evidence-based practice through self-directed learning and workshop strategies during clinical practicum', *Nurse education today*, 32(5), pp. 570-575.
- Zhu, C. (2012) 'Student satisfaction, performance, and knowledge construction in online collaborative learning', *Journal of Educational Technology and Society*, 15(1), pp. 127-136.

APPENDICE

Appendix 1: Information Sheet

UNIVERSITY OF THE WESTERN CAPE



Private Bag X 17, Bellville 7535, South Africa

Tel: +27219592274, Fax: + 27219592271

Email: gborubino@gmail.com

Project Title: Assessing knowledge, skills and attitude of undergraduate

nursing students regarding student-centered learning approach in a university in the Volta region, Ghana.

What is this study about?

This is a research project being conducted by Innocentia Ruby Gborgblorvor of the University of the Western Cape. We are inviting you to participate in this research project because your participation will enable us to identify the knowledge, skills and attitude deficits of students regarding student-centered Learning Approach and the results could assist in making necessary changes in the teaching and learning process. You are a possible research subject because you are a nursing student in the university and possess relevant knowledge about the phenomenon under study. The purpose of this research project is to assess knowledge, skills and attitudes of the undergraduate nursing students regarding student-centered learning approach in a University in Volta Region, Ghana.

What will I be asked to do if I agree to participate?

You will be asked to complete the questionnaire that will take 20 minutes to complete. The questionnaire will be filled in the lecture hall after class sessions. Participation in the research is not a course requirement thus voluntary.

Would my participation in this study be kept confidential?

The researcher undertakes to protect your identity and the nature of your contribution. To ensure your anonymity you have a legitimate right to withdraw from the study at any point

in time. This right will be respected and there will be no penalties if you decided to withdraw from the study. To ensure your confidentiality, your name will not be included in the questionnaire and you will fill the questionnaire independently. Only identification codes will be put on the data forms. Your information will be kept confidential and all data gathered will be locked in a safe place for five years. In addition, a password will be used to protect computer files. Only the researcher, supervisor and the statistician will have access to the data. If we write a report or article about this research project, your identity will be protected.

What are the risks of this research?

All human interactions and talking about self or others carry some amount of risks. We will nevertheless minimize such risks and act promptly to assist you if you experience any discomfort, psychological or otherwise during the process of your participation in this study. Where necessary, an appropriate referral will be made to a suitable professional for further assistance or intervention.

What are the benefits of this research?

There are no direct benefits to you however the results may help the investigator learn more about the undergraduate nursing students' knowledge, skills and attitude regarding student-centered learning approach and inform the educators when formulating, reviewing and implementing curricular of the undergraduates in your school. We hope that, in the future, other people might benefit from this study and further the information can form a basis for further research.

Do I have to be in this research and may I stop participating at any time?

Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any

time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

This research is being conducted by **Innocentia Ruby Gborgblorvor** and being supervised by **Professor Rene Phetlhu** of School of Nursing, at the University of the Western Cape.

If you have any questions about the research study itself, please contact:

Innocentia Ruby Gborgblorvor

Telephone number: +2330200356140

Email: gborubino@gmail.com

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

Head of Department

Professor Karien Jooste

Email: kjooste@uwc.ac.za

Telephone number: 021-959 2274

Dean of the Faculty of Community and Health Sciences

Professor Jose Frantz

University of the Western Cape

Private Bag X17, Bellville 7535

(+27)219592631, *Email:* jfrantz@uwc.ac.za

This research has been approved by the University of Western Cape's Senate Research Committee and Ethics Committee



Appendix 2: Participants Informed Consent Form



UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: +27219592274, *Fax:* + 27219592271

Email: gborubino@gmail.com

Title of Research Project: Assessing knowledge, skills and attitude of undergraduate nursing students regarding student -centered learning approach in a University in the Volta Region, Ghana

The study has been described to me in language that I understand. My questions about the study have been answered. I understand what my participation will involve and I agree to participate of my own choice and free will. I understand that my identity will not be disclosed to anyone. I understand that I may withdraw from the study at any time without giving a reason and without fear of negative consequences or loss of benefits.

Participant's name.....

Participant's signature.....

Date.....

Should you have any questions regarding this study or wish to report any problems you have experienced related to the study, please contact the study coordinator:

Professor Karien Jooste

University of the Western Cape

Private Bag X17, Belville 7535

Telephone: (021)959-2274

Cell: 0828972228

Fax: (021)959-2271 Email: kjooste@uwc.ac.za

Appendix 3: Data Collection Instrument



UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: +27219592274, Fax: + 27219592271

Email: gborubino@gmail.com

Undergraduate nursing students' perceived knowledge, skills and attitude regarding student-centered learning approach.

Introduction

According to Collins & Brien (cited in Froyd & Simpsom 2008) Student centered learning approach is teaching and learning approach in which students influence what to learn, resources and space of learning. The instructor offers students the opportunity to do their learning individually and from each other and coaches them in the skills they need to do so successfully.

The purpose of this study is to assess knowledge, skills and attitudes of undergraduate nursing students toward student-centered learning approach. Your participation in the study will provide valuable information which may guide curriculum development and the nursing faculty on how to support students to be successful in their learning. Your responses will remain anonymous.

Survey Questions

Questionnaire Code.....

Section A: Demographic data: Please tick (✓) as appropriate

1. Gender	
Male	Female
<input type="checkbox"/>	<input type="checkbox"/>

2. Nationality	
Ghanaian	others, please specify
<input type="checkbox"/>	<input type="checkbox"/>

For Official Use Only			
1	Female	1	Ghana
0	Male	2	Others
1	Ga		
2	Ewe		
3	Twi		
4	Other		

3 What languages do you speak (select according to your fluency): 1=very fluent, 2=moderately fluent, 3=less fluent				
English	Ewe	Ga	Twi	Other(Specify)

4. What is your current year of study			
Year 1	Year 2	Year 3	Year 4

INSTRUCTIONS

This questionnaire has four sections with specific headings. Please tick (✓) the most appropriate response to each statement.

Section B. Perceived knowledge of student-centered learning approach

1. Have you any prior knowledge about student-centered learning approach before entering the university?	1=Yes	No=2
2. Did you have any orientation on student-centered learning approach when you entered the university?	1=Yes	No=2

3. Rank how you get information on the knowledge of student-centered learning. Indicate your response by putting X in all the box in order of preference where 1=less likely and 4=Most likely

Information	1	2	3	4
Through friends				
Through students of higher institution				
Through my high school teacher				
Through the internet				

Rate your prior knowledge and understanding regarding SCLA. Tick the appropriate box (✓) 1= very poor, 2= below average, 3= average, 4= above average, 5= excellent

Statement	1	2	3	4
How will rate your knowledge on SCLA?				
What is the level of your understanding of SCLA?				

Are the following statements regarding SCLA true or false? Please tick (✓) i.e. 1= True and 2 = False

Statement	1	2
Students become owners of their learning in SCLA		
SCLA offers the opportunity to the student to become critical thinker and analyzer of information		
Students personalize their own learning		
Student employ self-directed leaning in SCLA		
In SCLA students develop skills for long life living		
SCLA is best described by facilitation of the teacher		
SCLA offers students the opportunity to develop academic and professional growth		
In SCLA students determine their what they should learn at their own pace		
Students can learn anywhere, anytime with any learning source		
Student evaluate their own academic progress		
In SCLA students develop deep approach to learning		
Students reflect on personal significance of what they learn		
In SCLA there is less contact hours with the facilitator		

Section C: Skills students have in student-centered learning approach. To what extent do you agree with the statements? Please Tick (✓) the appropriate box

1= Strongly disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly Agree

Statement	1	2	3	4	5
I am able to use the internet effectively in searching for information and learning					
I can construct knowledge from the books and material read					
I am able to write a good student portfolio					
I use my portfolio to monitor my academic progress					
I can transfer theoretical knowledge acquired into Clinical practice					
I am good in library search for information					

I can critically analyse information obtained from books articles					
I am able to use relevant information of literature my own learning					
I am good in e-learning					
I am capable of using e-mail effectively in communicating with my facilitators and colleagues					
I can identify areas of my learning needs and improve upon them					

Section D: Attitude. Rate your attitudes towards SCLA. Please tick \sqrt the appropriate box

1= very poor, 2= below average, 3= average, 4= above average, 5= excellent

Statement	1	2	3	4	5
How will you rate your participation in group assignment?					
How will you rate participation in class presentation?					
How will you rate your feeling of accomplishment in SCLA?					
How will you rate how you utilize your free periods?					
How will you rate your involvement in SCLA?					
How will you rate your achievement in SCLA?					
How do you rate your feeling of accomplishment in SCLA?					
How you will rate how you use feedback from your facilitator to improve your performance?					
How will you rate your reflection on your studies?					

UNIVERSITY of the
WESTERN CAPE

Thank you for your participation

Appendix 4: Ethical Clearance



UNIVERSITY of the
WESTERN CAPE

DEPARTMENT OF RESEARCH DEVELOPMENT

10 December 2015

To Whom It May Concern

I hereby certify that the Senate Research Committee of the University of the Western Cape approved the methodology and ethics of the following research project by:
Mrs R Gborgblorvor (School of Nursing)

Research Project:	Assessing knowledge, skills and attitude of undergraduate nursing students regarding student-centered learning approach in a University in the Volta Region, Ghana.
Registration no:	15/7/92

Any amendments, extension or other modifications to the protocol must be submitted to the Ethics Committee for approval.

The Committee must be informed of any serious adverse event and/or termination of the study.

A handwritten signature in black ink, appearing to read 'Patricia Josias'.

*Ms Patricia Josias
Research Ethics Committee Officer
University of the Western Cape*

Private Bag X17, Bellville 7535, South Africa
T: +27 21 959 2988/2948 . F: +27 21 959 3170
E: pjosias@uwc.ac.za
www.uwc.ac.za

A place of quality,
a place to grow, from hope
to action through knowledge

Appendix 5: Permission to Conduct Research Study

University of Health and Allied Science
School of Nursing
PMB33
Ho
15th December, 2015

The Registrar
UHAS
Ho

Dear Sir / Madam,

REQUEST FOR PERMISSION TO CONDUCT A RESEARCH STUDY IN THE UNIVERSITY

I, Innocentia Ruby Gborgblorvor of University of Health and Allied Sciences and a student of the University of the Western Cape, South Africa hereby request to conduct a research study in the School of Nursing of the University of Health and Allied Sciences. The study is assessing the knowledge, skills and attitudes of the undergraduate nursing students regarding student-centred learning approach. This study is part of the requirements for obtaining a Master in nursing education and will be done under the supervision and guidance of Professor Rene Deliwe Phetlhu of the School of Nursing, University of the Western Cape. The respondents of the study will be the undergraduate nursing students in the four year nursing program (first, second, third and fourth year). Data collection will be achieved by a self-administered questionnaire. The respondents will be asked to complete the questionnaires which will take about 20 minutes of their spare time and returned to the researcher. The rights to privacy, confidentiality and anonymity will be adhered during the study process. Code numbers will be assigned to the questionnaires to ensure respondent's identification is kept secret. The name of the University will not be included in the study findings. The records of the study will be kept under lock and key for 5 years after publication of the findings then will it be destroyed. The data will only be accessible to the supervisor; researcher and statistician. The researcher will ensure that highest standards of research planning, implementation and reporting are followed.

Attached is the clearance from the Senate Research Committee of the University of the Western Cape.

Should you have any question about the research study itself, please contact:

Prof. D. R. Phetlhu
University of the Western Cape
Private Bag X17
Bellville 7535
dphetihu@uwc.ac.za

Thank you.

Yours faithfully,



Innocentia R. Gborgblorvor



UNIVERSITY *of the*
WESTERN CAPE

Appendix 6: Approval from Participatory University

UNIVERSITY OF HEALTH AND ALLIED SCIENCES, HO
OFFICE OF THE PRO-VICE-CHANCELLOR

Tel: +233 0302748272
+233 0302742868-70

PMB, 31
Ho, Volta Region
Ghana

EXT 1002

Email: provoc@uhas.edu.gh



My Ref: PVC/DU16/VOL.3

December 21, 2015

Ms. Innocentia R. Gborgblorvor,
UHAS
Ho



Dear Ms. Gborgblorvor,

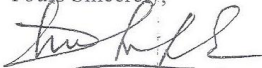
**RE: REQUEST FOR PERMISSION TO CONDUCT A RESEARCH STUDY IN THE
UNIVERSITY**

Permission is granted you to conduct a research study in the School of Nursing and Midwifery, University of Health and Allied Sciences. You are to ensure that you comply with the protocols as described in your request letter.

Any amendment, modification or extension to the protocols must be submitted to the University for approval.

I wish you all the best.



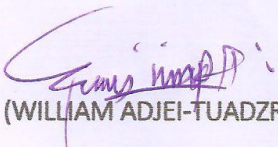
Yours Sincerely,



Prof. T. C. Fleischer
Pro-Vice-Chancellor

Registrar
Ag. Dean, School of Nursing and Midwifery

Appendix 7: Proofreading Certificate

	<p>GRANDPA & SONS PRIMAL COMMUNICATIONS GROUP <i>Proof readers, Writers, Interpreters, Video Producers, Advertisers, etc.</i> LOCATION: No 8 Asonfu Street, Awatidome, Ho (Adjacent Municipal Health Insurance Office) P. O. Box MA 145, Ho Email: willytuadzra@yahoo.com Bankers: Stanbic Bank, Ho, Gh. Cell No.: (00233) 0209510000/0243784994</p>	
22 nd December, 2016		
<p>TO WHOM IT MAY CONCERN: GBORGBLORVOR, RUBY INNOCENTIA (STUDENT NO. 3580115)</p> <p>This is to certify that we have proofread the Master's Degree thesis of the above candidate who undertook an independent study on the topic:</p> <p style="text-align: center;">ASSESSING KNOWLEDGE, SKILLS AND ATTITUDES OF UNDERGRADUATE NURSING STUDENTS REGARDING STUDENT-CENTERED LEARNING APPROACH IN A UNIVERSITY IN THE VOLTA REGION, GHANA</p> <p>We, therefore, recommend her thesis for examination.</p> <p> (WILLIAM ADJEI-TUADZRA) CEO & CHIEF EDITOR</p>		